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ABSTRACT

Field tests on an interpersonal skills instructional program, the Heartsmart Adventures, were conducted for the formative and summative evaluation in 14 classrooms in 7 schools of 394 students in grade 4 classes. The results indicate that the Heartsmart program is likely to provide an appealing, educationally relevant and worthwhile experience to fourth grade children regardless of ethnic/racial or socio-economic backgrounds; the program as a whole can be easily administered by the teacher, although certain specific activities require special group process skills to achieve maximum results; and the program will teach fourth grade students to be more proficient in identifying feelings and inferring feelings from the behavior of others, identifying ways in which people behave when they have certain feelings, determining feelings in others by asking, expressing needs and desires and taking appropriate actions to accomplish them, and expressing feelings. Current weaknesses of the program were found to be related to sex and racial/ethnic bias in the program materials, and to the lack of sufficient and clearly presented direction to teachers about the program goals and teaching methods. Extensive revisions of the program materials and teacher's manual were documented in the report to suggest how these two major weaknesses of the program were remedied. (PN)

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EVALUATION REPORT
FOR
THE HEARTSMART ADVENTURES

Submitted to
National Institute of Education

by

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November 1977

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ABSTRACT

In the spring of 1977 a National Institute of Education supported field test evaluation study was conducted by Research for Better Schools on an interpersonal skills instructional program known as *The Heartsmart Adventures*. The goals of the field test were to conduct both formative and summative evaluation of the program.

The field test was conducted in 14 classrooms in seven schools in or near Philadelphia, Pennsylvania. The sample consisted of 394 students in 4th grade classes, and included students of both sexes and most ethnic groups. Half the classrooms recieved instruction in the *Heartsmart* program, and the other half served as comparison classes.

Two RBS developed criterion-referenced tests, the What Would You Do? test and the What's Happening? test, and one standardized measure, the My Class Inventory, were used to assess program outcomes in relation to the program's instructional goals. The children's version of the Fundamental Interpersonal Relations Orientation Scales (i.e., FIRO-BC), developed by William Schutz, was used to explore possible program impacts on students' interpersonal needs. Data obtained by pre- to post-testing of the above measures were analyzed primarily by repeated measures design multivariate analysis of variance procedures. Formative evaluation was largely conducted by "consultant review," observational, and interview procedures.

A summary of conclusions based on evaluation findings follows. The field test version of *Heartsmart* may be perceived as relatively

harmless, although certain situations, elements or concepts of the program were found to be potentially harmful, and directions to the teacher allowed too much latitude for potentially harmful variations. While social fairness in the materials may have been achieved in quantitative terms, a pervasive sex and racial/ethnic bias was present in the portrayal of female and non-white characters. The program was implemented as intended at all sites, and was not distorted by variations or innovations. The program was found to be appealing to at least 75% of the students, and teachers considered the program both appealing and educationally worthwhile. The evidence indicated that almost all *Heartsmart* pupils grasped the main ideas presented in tape-led leesons, although other factors besides *Heartsmart* instruction may have accounted for student achievement results. Conclusions were mixed with respect to educational effectiveness. The *Heartsmart* program was judged to be successful in achieving the objective of teaching students several specific interpersonal skills, and possibly of facilitating the application of these skills to out-of-class peer and adult interpersonal situations. No definitive conclusion was reached with respect to the program's ability to improve the perceived climate of the classroom. The quality and quantity of evidence presented in reference to evaluating the program's ability to produce a better match between students' expressed and wanted interpersonal needs in the areas of inclusion and affection behavior were insufficient to reach a definitive conclusion. The *Heartsmart* program may have produced the desired effects for girls to a greater extent than for boys. Pre-existing social climate differences in the classrooms did not measurably effect the nature or extent of program effects. Program outcomes did not appear to be related to implementation variations.

The major strengths of the *Heartsmart* program were judged to be as follows: the *Heartsmart* program is likely to provide an appealing, educationally relevant and worthwhile experience to fourth grade children regardless of ethnic/racial or socio-economic backgrounds; the program as a whole can be easily administered by the teacher, although certain specific activities require special group process skills to achieve maximum results; and the program will teach fourth grade students to be more proficient in identifying feelings and inferring feelings from the behavior of others, identifying ways in which people behave when they have certain feelings, determining feelings in others by asking, expressing needs and desires and taking appropriate actions to accomplish them, and expressing feelings. Current weaknesses of the program were found to be related to sex and racial/ethnic bias in the program materials, and to the lack of sufficient and clearly presented direction to teachers about the program goals and teaching methods. Extensive revisions of the program materials and teacher's manual were documented in the report to suggest how two major weaknesses of the program were remedied.

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CHAPTER ONE: INTRODUCTION

This chapter presents background information concerning previous related evaluation work, delineates major audiences for this report, and describes the content and organization of the report.

Background

Since 1974 Research for Better Schools (RBS), through support provided by the National Institute of Education, has been engaged in conceptualizing, designing and developing an interpersonal skills instructional course known as *The Heartsmart Adventures*. This program, initially labeled Testing Interpersonal Hypotheses (TIH), was designed to teach 9 - 11 year old children important concepts and skills that would enable them to participate more effectively in their interpersonal relationships.

Evaluation has played an essential and continuous role in the development of this program. During 1974-75, prototype materials of individual program components were tested and a tryout of the entire program was conducted in a single, racially mixed fourth grade classroom in Los Angeles (Berzon, et al., 1975). This preliminary evaluation focused on students' ability to follow the storyline of the program and comprehend the basic concepts presented in the materials. The extent to which the lesson materials were appealing and attention-holding was also a primary question addressed in this early evaluation. Evaluation results from initial tryouts of the program materials were used to make revisions. The revised program was then subject to a pilot test during 1975-76 in which the major concerns were to gather preliminary summative evaluation as well as additional formative evaluation data; the pilot test sample included students in eight fourth grade classrooms in Los Angeles. Information about program appeal, student learning, program effectiveness relative to instructional objectives, teacher implementation, relevance and usefulness of the program for low SES, Black minority children, and parental reaction was gathered during the pilot test. Based on evaluation results (Berzon, et al., 1976), a second set of major revisions was made in the program. To complete the development/evaluation cycle for the program, a field test was conducted during 1976-77 in the Philadelphia, Pa. metropolitan area mainly for the purpose of assessing the program's effectiveness to deliver on its goals and objectives, but also for the purpose of completing materials revisions in anticipation of marketing the program for commercial use in 1978. The content of this report relates principally to the methods and results of this field test.

Audiences

The major audience for this report is the National Institute of Education, as the sponsor for the development of the *Heartsmart* program. It is worth noting that this report may be valuable to prospective school system personnel interested in adopting this program within their elementary school curriculum. Another possible audience for this report, or parts herein, is the Joint Office of Education/National Institute of Education Dissemination Review Panel. The major responsibilities of this Panel are to evaluate evidence of program effectiveness supplied by the program developer, and to decide on the basis of the evidence presented whether or not government funds should be authorized to aid the dissemination of the program throughout the educational community.

Content and Organization of the Report

The content of this report is divided into six chapters. This introductory chapter provides general background information about the present field test study and an overview of the remaining contents of the report. Chapter Two describes *The Heartsmart Adventures* program in terms of program goals, program content and structure, and program implementation. Chapter Three presents a detailed description of the evaluation plan and procedures used in conducting the field test. In the third chapter, the evaluation model which provided conceptual integrity to the field test is described; the principal field test questions derived from this model are then delineated; and finally, the methods and procedures which were used to respond to the field test questions are discussed. Chapter Four reports results and findings of the field test in relation to each of the major field test questions. Chapter Five, Summary and Conclusions, attempts to summarize major findings of the field test and presents conclusions in the form of educational claims for the program, and new and/or unresolved questions. Chapter Six describes revisions made to program materials. Appendices are provided following Chapter Six as supplemental information to the body of the report.

CHAPTER TWO: PROGRAM DESCRIPTION

The description of the program presented here relates to that used in the field test, and does not reflect or include revisions made as a result of data collected during the field test.

I. PROGRAM GOALS

The Heartsmart Adventures is a program for students, ages nine to eleven, designed to enable them to develop constructive human relationships.

The program consists of thirty lessons divided into three Units.

The twelve lessons of Unit I are designed to enable students to:

- experience themselves in the world more fully through increased awareness of their senses and feelings;
- express their emotional needs more proficiently and with increased versatility;
- respond more effectively to others through improved understanding of the reciprocal relationship between their own and others' feelings and behaviors;
- cooperate more effectively with others;
- transfer interpersonal skills learned in one situation to other situations. (Berzon, 1977).

The nine lessons of Unit II are designed so that

> students — through peer group interaction — will be able to identify and express their individual needs to establish and maintain satisfactory relationships with others with respect to:
> - interaction and inclusion;
> - power and control;
> - love and affection. (Berzon, 1977).

These three affective areas, inclusion, control and affection, "constitute a sufficient set of areas of interpersonal behavior for the prediction and explanation of interpersonal phenomena." (Schutz, 1966).

The nine lessons of Unit III are designed to

> enable students to identify and express their individual needs to feel that they are:
> - significant and worthwhile human beings (inclusion);
> - competent, responsible persons (control);
> - lovable individuals (affection) (Berzon, 1977).

II. CONTENT AND COMPONENTS

The program consists of thirty lessons, each designed to take approximately half an hour. Twenty-four of the lessons are tape-led. Six lessons are discussions, called Heart to Heart talks, led by the teacher. In addition to these lessons there are optional enrichment activities to be used at the teacher's discretion.

The tapes tell the dramatized story of a boy named Jack, from the Kingdom of Hearts, who has many adventures as he finds his feelings and learns to express them. In the story Jack learns, among other things, to understand himself and other people better.

The tapes also guide students in individual and small group activities for which they use gamepages and/or program accessories.

The six teacher-led Heart to Heart talks interspersed throughout the program, are designed to provide students with the opportunity to discuss ways in which they relate program concepts to their own personal experiences.

The program is divided into three units. Unit I, introducing the language, concepts, and storyline, requires that students work individually. In Units II and III students work in six-person groups.

Materials

Each class which participated in the field test received the following materials:

- A teacher's manual containing lesson notes, story and tape-led activity summaries, illustrations of student materials, suggestions and masters of worksheets for optional activities, discussion questions for the Heart to Heart talks, and guidelines and descriptions of program concepts and components.
- Student Journal pages for each student for each lesson, consisting of strip-cartoon Storypages (to be colored while students listen to the story), Gamepages (to be completed for the tape-led activities), and Reviewpages (consisting of questions about the lessons(s) reviewed on the tape).
- A song book of the 8 *Heartsmart* songs for each student.
- A set of tape cassettes consisting of 24 lesson tapes, 2 song tapes, and a leadership tape. (The latter is designed to teach students elected as small group leaders to manage group tasks effectively.)
- Small accessories for each small group, consisting of 1 cardboard microphone, 2 TV screens, 6 yarn loops (color coded), 6 picture pages, and 2 host pages.
- Large accessories for each small group, consisting of a Group Journal (a desk-top board 22" X 44"), a large picture to color, and a "slice" of a paper "pie" to color.

All accessories were used for tape-led activities.

In addition to these materials, each school was asked to provide crayons and a tape cassette player.

III. PROGRAM IMPLEMENTATION

The field test version of the teacher's manual suggested that at least one lesson should be taught each week, the lessons to be supplemented by teacher-led optional enrichment activities at the teacher's discretion.

Tape-led Lessons

Each of the 24 tape-led lessons follows the same format. Materials are distributed and the teacher turns on the tape, placing the player so that students can hear without difficulty. The teacher on the tape introduces the lesson by stating the lesson objectives, reminding students that they may color their Storypages, and telling them to listen carefully. The dramatized story installment follows. The teacher on the tape then comments on the story, instructs the students to turn to their Gamepages and draw or write according to her directions, and provides feedback for their responses. Finally, students turn to their Reviewpages to which they respond by checking "yes" or "no" to five questions presented by the teacher on the tape. Students check their own responses according to feedback given by the teacher on the tape. When the tape finishes — having taken approximately 30 minutes — the classroom teacher collects the materials and may conduct an optional activity as suggested in the manual if he or she wishes.

Students work individually for the tape-led lessons of Unit I. In Units II and III students work in small (six-person) groups. Although the format of all tape-led lessons is the same, in Units II and III there is slightly less tape feedback for the activities since students are directed to discuss their responses within their groups.

Heart to Heart Talks

Each of the 6 Heart to Heart talks follows the same format. The classroom teacher explains the purpose of the discussion.

> This is a time to talk, heart to heart, about what you've been hearing about on the tapes, and what you've been doing in the *Heartsmart* games here in class. This is a time to talk about how any of that reminds you of things in your own life. Talk one at a time; listen carefully to the person who is talking; speak up as loudly and as clearly as you can when you are talking. (Berzon, 1977).

Referring to the lesson notes given, the teacher reads or paraphrases a *main point*, a value judgement based on a concept presented in the story, and asks a *question*, usually requiring students to give opinions, illustrative examples, or "real life" descriptions of situations related to the main point. Suggestions are given in the teacher's manual for ways in which the teacher can encourage all students to participate. An average of five main points, each with a related questions, is presented for each Heart to Heart talk. No timelines are suggested for these talks; the teacher's manual implies that all given main points and questions should be covered.

In the introductory guidelines of the manual, the teacher is advised to:

- repeat and reflect students' responses;
- give support, possibly by referring to situations encountered in the everyday classroom, as told from the point of view of the teacher and her/his feelings;
- vary the questions to allow for both short and long responses;
- encourage students to discuss their personal experiences only when they indicate they really want to do so;
- focus the discussion on the given questions. (Berzon, 1977).

Teacher-led Activities

Suggestions for teacher-led activities are included in the teacher's manual for each of the 24 tape-led lessons. A total of 154 activity suggestions are given, all related to *Heartsmart* concepts, but also designed to be integrated with other curricular subjects. The teacher is advised to use any or all of these activities at his or her discretion, combining them with studies in other subject matter areas, assigning them for free time, or using them to illustrate a *Heartsmart* concept brought up by students' behavior.

Small Group Activities

At the end of Unit I the teacher is instructed to form six-person groups for the remainder of the program. Each student is asked to list 5 students with whom he or she would like to work. The teacher uses these lists, and the criteria below to form six-person groups. The criteria are:

- each group should contain a range of ability levels;
- each group should contain at least one independent, task-oriented member;
- students who tend to be monopolizing and disruptive should be placed in groups with students not likely

to cooperate with them in efforts to resist or compete with the tape;

- students who tend to be particularly passive should be distributed throughout the groups. (Berzon, 1977).

The teacher is instructed to appoint a leader for each group. Subsequently, every four lessons, students within each group may elect their own leaders. A leadership training tape is provided; the teacher is instructed to play this tape to new group leaders before they assume the leadership role. The purpose of the tape is to "familiarize the leaders with lesson materials and procedures...so that during the lesson they will not have questions about what they should be doing" (Berzon, 1977).

CHAPTER THREE: EVALUATION PLAN AND PROCEDURES

This chapter delineates the major goals and questions of the field test, describes the field test procedures, and discusses limitations of the study.

I. FIELD TEST GOALS

The major goals of the field test were to conduct both formative and summative evaluation of the *Heartsmart* instructional program. With respect to formative evaluation, the assumption was that revisions and development work based on previous "tryouts" and pilot testing of the program would not be undone by the field test; the role of the field test would be that of providing information for refining as many of the basic attributes of the program as needed to be effective in "real" instructional settings.

Summative evaluation was primarily conceived in terms of assessing program effectiveness. "Effectiveness" was interpreted as the extent to which the program accomplished its instructional goals and objectives. Although formative evaluation constituted an important goal of the field test, and considerable effort, resources, and time would eventually be consumed in this task, the field test was designed to emphasize summative (i.e., goal-based) evaluation. This priority of the field test was determined in part by the fact that 1976-77 would be the final year in the development cycle of the program and the initial stage of product dissemination. The OE/NIE Joint Dissemination Review

Panel was considered as a possible cornerstone for initiating a possible broad dissemination effort.

II. FIELD TEST QUESTIONS

According to the "countenance" model of evaluation proposed by Stake (1967), program evaluation involves taking into consideration three things: (1) antecedents; (2) transactions; and (3) outcomes. In evaluation work, Stake proposes that each of these be described as fully as possible, and that within each as well as between them there are important relationships to determine; in Stake's model, these are referred to as congruency or contingency relationships. A congruency relationship involves a comparison between program intentions and observations in each of the above three areas. To be fully congruent, intended program antecedents, transactions, and outcomes would be closely matched with what actually happens. A contingency relationship denotes interdependence among these three areas. Educational outcomes, for example, frequently come about as a result of given program antecedents and transactions. The purpose of the field study test is to provide descriptive and evaluative information relevant to selected program congruencies and contingencies. Figure 1 shows the general model which guided the field test; represented in this model are Stake's three program evaluation categories, two evaluation tasks, and two field test/evaluation goals.

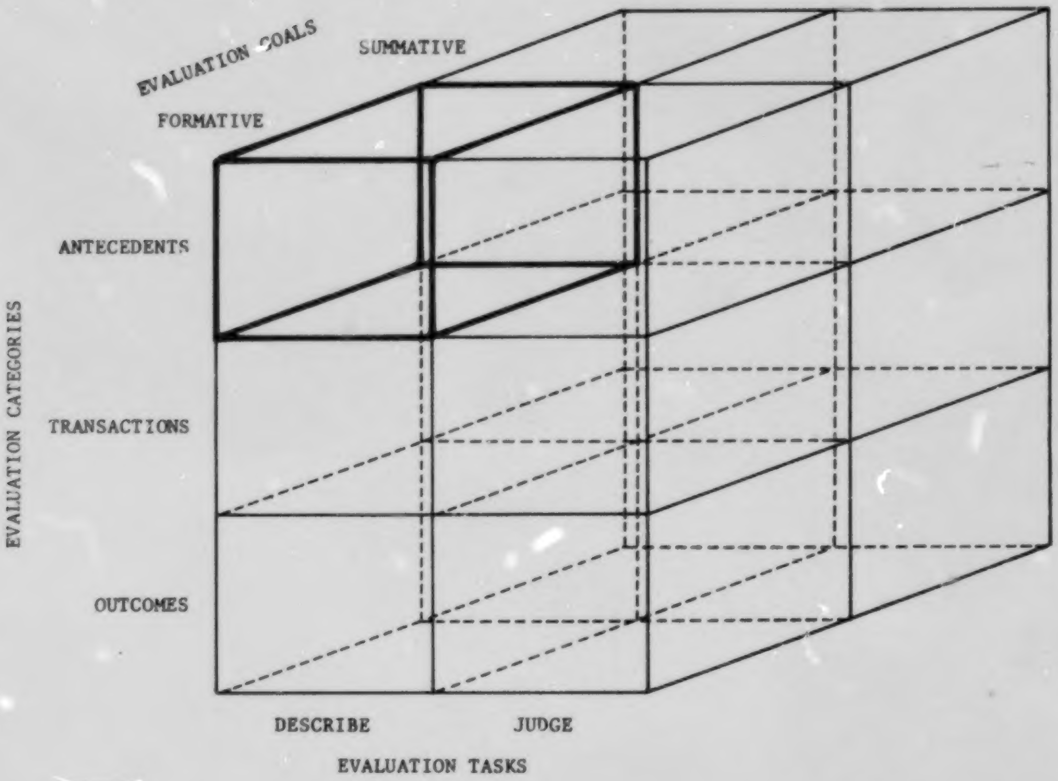
EVALUATION GOALS
SUMMATIVE
FORMATIVE
ANTECEDENTS
TRANSACTIONS
OUTCOMES
EVALUATION CATEGORIES
DESCRIBE
JUDGE
EVALUATION TASKS

Figure 1: Program Field Test Model

Antecedents

According to Stake, antecedents are those conditions existing prior to teaching and learning which relate to program outcomes. Four major antecedents are considered and/or described in this report: (1) the field test sites, consisting of students and teachers who participated in the field test, and the community environments within which the field test was conducted; (2) an orientation session conducted for teachers as preparation to teach the course; (3) the instructional program, including its goals, organization and content; and (4) the social environment of the classroom.

Two of the principal field test questions and concerns which will be discussed at length in this report relate to the contents (i.e., intrinsic quality) of the program. *The Heartsmart Adventures* program was designed to enhance interpersonal skills among 9-11 year old children. One of the primary means by which the program attempts to achieve interpersonal skill objectives is through group interaction. Most of this interaction is carefully structured, and takes place among members of small groups of students without intervention from the teacher. Some of the interaction, structured to a certain degree, takes place among the members of the class and the teacher. Because the objectives of the program are primarily affective, and possibly value-laden, and the means of promoting them involves expression of feelings and translation of feelings into actions or behaviors, there is a potential possibility that the program could produce harmful educational and/or psychological effects. With this concern in mind the field test attempts to address the following major question:

QUESTION 1: To what extent might the program be harmful to learners with respect to educational and psychological effects?

This question was addressed by means of an extensive review of course materials and the teacher's manual by selected outside experts. The review procedures and results of the review are reported in Section I of Chapter Four.

The second major question of the field test is related to social fairness of the materials. Research for Better Schools follows a consistent policy with respect to products it develops: instructional materials ought to be free from racial/ethnic and sex bias and that racial/ethnic minorities should be equitably represented according to RBS "affirmative action" standards. RBS is committed to make appropriate revisions in materials which are judged as falling below established standards. With this concern and objective in mind, the field test attempts to answer the following two-part question:

QUESTION 2: Are racial/ethnic minorities and both sexes fairly represented in the program materials, and are those materials unbiased in their treatment of sex and racial/ethnic differences?

Transactions

The transactions of a program include all those interactions that occur in the implementation of a program which may affect educational results. In terms of the *Heartsmart* program, transactions which were deemed important to describe and evaluate relate to the way the teacher administered the program and to classroom social interactions involving students and teacher. The latter is especially important in that the program was designed to bring about increased interpersonal effectiveness among pupils through reinforcing certain kinds of communication and behavioral interaction. An additional field test question emerges from these considerations:

QUESTION 3: Were all essential parts of the program implemented as intended?

These and related aspects of program implementation are dealt with in Section III of Chapter Four. There, the program is described in terms of how it should have been implemented according to the teacher's manual, and how it was actually implemented; then an assessment of "congruency" is made between intended and actual implementation.

Outcomes

According to the "countenance" model of evaluation, the category of "outcomes" refers to the consequences of educating — immediate and long-range, intended and unintended, cognitive, affective, and behavioral. This field test report focuses on selected outcomes of the program and attempts to relate them as far as possible to specific antecedent conditions and transactions. Both congruency and contingency evaluation questions are considered. Congruence questions ask whether the educational outcomes of the program are consistent with intentions. Questions 4, 5, and 6 illustrate this type.

QUESTION 4: Was the program educationally appealing and worthwhile to teachers and pupils?

QUESTION 5: How well did students perform on instructional tasks of the program, which reflect achievement in understanding and knowledge acquisition?

QUESTION 6: How effective was the program in terms of accomplishing its major instructional goals and objectives?

In contrast, contingency questions are concerned with determining the primary factors which produce or are related to obtained educational results. Question 7 below is concerned with program contingencies:

QUESTION 7: What factors among antecedent conditions, and program transactions relate to the nature and extent of program effectiveness?

Underlying these questions is the common concern for describing program outcomes and/or evaluating some aspect of program effectiveness. The differences among these questions are worth noting, however. The notion of "effectiveness" as used in this report is referenced to the instructional goals and objectives of the program. As previously discussed, the goal of summative evaluation is to provide information about program effectiveness, as determined by how well the program has accomplished its stated goals and objectives. Questions 6 and 7 deal specifically with program effectiveness; results bearing on these questions are reported in Section VI of Chapter Four. Question 4, which focuses on program appeal/acceptability, may relate to program effectiveness but does not provide direct evidence of student learning; therefore, Section IV of Chapter Four gives special attention to results related to this question. Question 5 expresses interest in measuring student achievement, which implies effectiveness. The major reason for treating this question apart from the question of program effectiveness is simply that knowledge acquisition was not stipulated by the developer as a general goal for the program. Results on student achievement are reported in Section V of Chapter Four.

III. FIELD TEST DESIGN AND SAMPLE

This section describes the methods and procedures which were employed in the field test. Emphasis will be placed on describing the methods and procedures used to assess program effectiveness (i.e., summative evaluation). This section concludes with a general synthesis of the major goals and questions of the field test and the field test procedures.

Summative Evaluation Design

The design for the evaluation of program effectiveness was essentially a quasi-experimental design (Campbell & Stanley, 1963) in which groups instructed in the program would be compared with non-instructed groups. The significant features of this design are the use of comparison groups, (i.e., non-instructed pupils), pre- and posttest measurements, and non-random selection and assignment of subjects to instructional and non-instructional groups. It is generally acknowledged in the literature on research design that non-random assignment of subjects to treatment conditions has important implications for data analysis and for what types of conclusions can be drawn from evaluation results. (These implications are discussed more fully in this chapter in Section IV: Limitations.) Because two of the four primary measures used to assess program effectiveness were administered only as posttests, the summative evaluation design might be more accurately described as a modified quasi-experiment.

Sampling Procedures

A three-stage sampling procedure was necessary in selecting sample groups for evaluation study: (1) selection of school districts; (2) selection of classes (teachers) within schools; and (3) selection of pupils within classes. Control by RBS over the selection process was limited at each stage. It was necessary and proper to seek consent and cooperation from district and school personnel as well as parents in order to implement the evaluation design.

A primary goal of sampling was to obtain heterogeneous samples with respect to residential (i.e., urban-suburban), racial/ethnic, and socioeconomic characteristics. Without sample diversity, the ability to generalize the findings of the field test to diverse target populations with similar characteristics would be severely limited. The sampling procedures attempted to ensure that pupils of varying background characteristics would be included in the sample, although would not necessarily, simply by inclusion, be representative in a statistical sense of the national or even regional population. Judgmental (or purposive) rather than probability sampling methods were employed in order to obtain heterogeneous samples on the above dimensions.

Another sampling consideration (or constraint) was related to the geographical proximity of field test sites to RBS. Because the field test plan called for on-site observations of experimental classrooms, the location of school sites had to permit easy and economical access. With these general sampling objectives in mind, the procedures used to derive a sample for the field test at each successive stage will be described.

Districts/Schools. The starting point for school selection was to identify school districts in the Philadelphia area which met the above sampling criteria. Five school districts were identified; one in Philadelphia, and four in suburban areas surrounding Philadelphia. An Assistant Superintendent in charge of curriculum, or a Director of Elementary Education was contacted by RBS. The *Heartsmart* program, RBS, and the nature and purposes of the field study were described during this initial contact. Two of the five suburban school districts were not able to accommodate the field test. The remaining school districts were sent a follow-up letter and sample program materials for review. The Philadelphia School District department of evaluation requested, and was given, a description of the proposed field test and copies of the measures to be used. In Philadelphia it was necessary to obtain consent from both the department of curriculum and the department of evaluation. Subsequently, district administrators recommended elementary schools to serve as field test sites. As a result of a series of contacts and meetings held between members of the RBS staff, school principals, and two fourth grade teachers selected by the principals within each school, commitments were secured from seven schools to field test the program. Three schools were in Philadelphia; three were in a district just outside Philadelphia; and one in the urban fringe.

Classes. During the meetings held at the individual school level, the matter of which teacher or class would serve as the experimental group and which the comparison had to be decided. The decision rested largely with the teachers themselves. The best policy to follow at the time was to permit teachers the autonomy to decide which group to be in, rather than for RBS to insist on assigning a particular teacher to the treatment condition. It was hoped that this procedure would capitalize on teacher motivation and interest and would, in effect, create more positive conditions for the field study.

The field study sample consisted of fourteen self-contained classrooms, two from each of seven schools, all of which were pre-existing at the time of introducing the *Heartsmart* program. It can be assumed that a socio-cultural climate had already been established in each classroom before the pretests were administered. This fact suggested taking classroom climate directly into account in a contingency analysis of program effectiveness.

Pupils. Frequently pupils in classrooms selected for educational "experiments" are a captive audience; neither the students nor their parents are offered a choice of participation. In this evaluation study, a procedure known as "parental consent" was followed so that parents of children in selected classrooms/schools would be free to choose whether or not to have their children take the program. In accordance with policies, guidelines, and procedures developed by RBS to meet federal government regulations on the Protection of Human subjects, RBS designed a parental consent form and prepared materials (i.e., Information Pages) which described the course and its potential benefits and risks to children. These materials were sent home to parents who were requested to return the consent form to the school. A signed form would indicate parental approval to have their children take the course. Many of the forms returned contained enthusiastic comments about the *Heartsmart* program; a small number of parents expressed some reservations about their child's participation, but nevertheless, gave their consent. Only one pair of parents did not agree to have their child involved in the course.

The parental consent procedure was successful in that it did not result in large numbers of withdrawals that might either have jeopardized the field test or, in a lesser way, have seriously biased the sample. (Parental consent materials may be found in Appendix A).

Sample Description

In the following discussion, schools, teachers, and pupils participating in the field test are described.

Districts/Schools. A total of seven schools, from three districts, served as field test sites. Three schools were located in Philadelphia suburbs, one in the suburban fringe, and three in inner-city Philadelphia. Attempts were made to obtain specific demographic data (e.g., family median income, educational attainment, racial origin) on the local communities in which the field test sites were located. Several statistical and non-statistical sources were consulted, including the following: Pennsylvania Department of Commerce M-5 Reports; Statistical Abstract for Pennsylvania, U.S. Department of Commerce (City-County Data Book), Statistical Abstract of U.S.; U.S. Census Bureau Data of 1970; and City Planning Commission (Tract Group Profiles). These sources provided either out-dated information, or statistical breakdowns using geographical units that were much too gross for providing meaningful comparisons among field test sites. In view of the difficulties in obtaining more precise descriptive data on school communities, largely impressionistic (i.e., observational) data must suffice as the basis for describing field test sites. A rough estimate of SES characteristics was made by observing things such as size of housing, yard space, type of housing, model and year of automobiles in the neighborhood, and general neighborhood condition.

The three suburban schools are located in predominantly White neighborhoods of varying socio-economic status: lower-middle, middle, and upper-middle income levels. The school in the suburban fringe is predominantly White, in a neighborhood of varying socio-economic status. Two of the three Philadelphia schools are situated in virtually all-Black neighborhoods and appear to be low in socio-economic status. The third school is predominantly Black with a significant concentration of White pupils. This school is located in integrated Black-White neighborhoods of varying (i.e., upper-middle to low) socio-economic status.

Teachers. Fourteen teachers participated in the field test: seven experimental class teachers and seven comparison (non-program) teachers. In the experimental classes, all teachers were female; two were Black and five were White. Six of the seven comparison classes were taught by four White and two Black teachers. Two comparison class teachers were male, one Black and one White. In the remaining comparison class, a change from a Black female to a White female teacher occurred during the field test; this shift caused no procedural problems and is assumed to be inconsequential.

No background data were collected for comparison class teachers. Experimental class teachers had a combined total of 73 years of teaching experience, averaging slightly over 10 years each. No experimental teacher had previously taught fewer than three or more than 16 years.

Pupils. A total of 394 pupils were subjects in this field test. Of this number, all but 10 were fourth graders. It was discovered after the field test began that one of the experimental classes included 10 fifth graders. In Table 1, a breakdown of the sex and racial composition in each school by experimental vs. comparison classes is given.

Class size figures are based on the initially selected subject pool (i.e., class rosters provided by teachers) and do not reflect sample attrition. Subject loss from original sample pool during the field test was minimal (i.e., estimated at 12) and therefore is not likely to have a biasing influence on the evaluation results. More importantly, no subject dropped from the field test because of program-related problems.

The sample is characterized by balance and diversity. Class size is nearly equal between experimental vs. comparison classes within each school. Distribution within sex and race categories is also fairly evenly matched between groups within schools. The two possible departures from balance were found in school E where the experimental class contained roughly 15% more White pupils than the comparison class, and in school G where the experimental class included 12% more males than females compared with the comparison class. These class

Table I

Description of Student Sample by Sex, Race, and Treatment Condition

School	Class	N	SEX (%)		RACE (%)		
			Male	Female	White	Black	Oriental
A	Experimental	25	48.0	52.0	76.0	24.0	0.0
	Comparison	22	50.0	50.0	68.2	31.8	0.0
B	Experimental	28	50.0	50.0	96.4	0.0	3.6
	Comparison	29	48.3	51.7	100.0	0.0	0.0
C	Experimental	28	46.4	53.6	96.4	0.0	3.6
	Comparison	27	55.6	44.4	96.3	0.0	3.7
D	Experimental	24	54.2	45.8	95.8	4.2	0.0
	Comparison	25	60.0	40.0	92.0	8.0	0.0
E	Experimental*	32	46.9	53.1	25.0	75.0	0.0
	Comparison	32	50.0	50.0	9.4	87.5	3.1
F	Experimental	31	45.2	54.8	0.0	100.0	0.0
	Comparison	31	51.6	48.4	0.0	100.0	0.0
G	Experimental	29	44.8	55.2	0.0	100.0	0.0
	Comparison	31	32.2	67.8	0.0	100.0	0.0
Total		394	48.8	51.2	54.0	45.0	1.0

*This group includes ten fifth grade pupils.

differences, however, are not large in actual numbers of pupils. The balance obtained in class size, sex, and race does not, of course, imply initial statistical equivalence on measured program or even non-measured program-related variables.

The total sample is nearly equally divided between Black and White pupils, and male and female pupils. However, this should not mask the diversity which is found among the seven schools with respect to race, and related characteristics such as the urban/suburban split. Sample pupils in schools B, C, and D are over 90% White, whereas sample pupils in schools F and G are 100% Black. Schools A and E have racially mixed sample classes.

Although systematic data were not gathered on ethnic background characteristics of the sample, it is worth noting that children from Armenian, Polish, and Spanish heritage are also included. These ethnic groups were not concentrated in any one school or treatment condition.

Upon request, teachers provided information on children with special handicaps (e.g., hearing, sight, language) and serious behavior problems which could impede their learning in the program. A small number of foreign-born pupils were identified as having language problems, but not serious enough to invalidate their test scores on any evaluation measures. Another small number of children were judged by their teachers as having social behavior problems. Teachers felt, however, that these children might benefit most from the program. There was no educational or psychological reason to delete these pupils from the field test, especially after parents gave their consent.

IV. TEACHER ORIENTATION

As a part of implementing the field test, teachers and school principals were invited to RBS for a one day orientation session designed primarily to describe the program in greater detail, demonstrate how to teach the program, and respond to questions and discuss general problems related to the field test. Betty Berzon, the program developer, was present to conduct the teacher training and to present the philosophical and theoretical background of the program. The agenda of the teacher orientation session can be found in Appendix B. Following the orientation, participants, including RBS program staff, completed an evaluation form which was designed to assess the effectiveness of the teacher orientation. A tabulated summary of these results if presented in Appendix B. The results generally indicate that the teacher orientation session was successful.

V. FIELD TEST MEASURES

The evaluation measures and data sources are briefly described in terms of the following categories: (1) Opinion Surveys; (2) Observation Forms; (3) Interviews; (4) Procedural Forms/Guidelines; (5) Criterion-Referenced Tests; and (6) Standardized Measures. All data collection devices are included in Appendix C.

Opinion Surveys

Opinion survey forms were completed by teachers and students.

Teacher Opinion Surveys. Four Teacher Opinion Surveys (TOS) were designed to obtain descriptive and evaluative information from experimental teachers about (a) individual lessons (TOS Form #1), (b) Heart to Heart talks (TOS Form #2), (c) individual course units (TOS Form #3), and (d) the course as a whole (TOS Form #4). The content of survey questions primarily dealt with program implementation, program worth, classroom process, and course impact. Most survey questions were of the fixed alternative type; a few questions called upon teachers to give short answers. Most data gathered from these four surveys were intended primarily for formative evaluation purposes.

Student Opinion Surveys. These surveys were developed to ascertain the opinions of experimental students regarding Tape-led lessons (Survey A), the Heart-to-Heart talks (Survey B), and the Small Groups (Survey C). These surveys were designed to be answered in 1-3 minutes. The majority of questions asked students about how much they liked or didn't like something and/or what they liked or didn't like about that. These survey data were also gathered for formative evaluation purposes.

Observation forms.

Selected tape-led lessons and Heart-to-Heart talks were observed in each experimental classroom. Observation forms and question sheets were constructed separately for lessons and Heart-to Heart talks, but shared a common purpose: to describe and evaluate program implementation in the areas of teacher and student behaviors. Construction of observation materials involved searching the teacher's manual for directions the teacher was supposed to follow in teaching the course, and for descriptions of expected student behavior. Based on this search, a series of questions was written to be answered through classroom observation. Observation data were intended to serve formative evaluation needs and to provide important information concerning possible contingencies related to program effectiveness.

Interviews.

Interviews were conducted with teachers and students.

Teacher Interview. At the end of the field test, experimental teachers were interviewed about their opinions and observations concerning varied aspects of the course. The interviews were designed for 45-60 minutes. The following is a list of content areas covered by the interview: (a) reaction of parents and teachers to the program; (b) experiences with other instructional programs similar to *The Heartsmart Adventures*; (c) student reactions to the program, and (d) use of *Heartsmart* concepts and activities with experimental classes and other classes taught. The results of the interview provided further information upon which to base program revisions.

Student Interview. A 10-15 minute interview was conducted with three to five pupils selected from one of the small groups in each experimental classroom at the end of the field test. This interview selection process was tantamount to being random in effect. The interview was designed to assess the nature and extent of program impact (i.e., effectiveness) on students. The primary areas investigated in the interview related to expression of feelings — what feelings were expressed, how often, and in what situations. Interview results were intended for summative evaluation purposes.

Procedural Forms/Guidelines.

Teachers were provided a Field Record Book which contained a Student Attendance Record, Course Schedule, and a Teacher Information Sheet. The first two forms were designed to maintain a record of program implementation throughout the field test. A small amount of teacher background data was gathered by the Teacher Information Sheet for general information and reporting purposes.

Guidelines were employed to facilitate the evaluation of intrinsic quality (i.e., harmlessness, social fairness) of the program. Outside consultants who performed a review of the program were furnished with a set of questions/tasks to assist the review. Section I of Chapter Four provides more detailed information concerning review guidelines.

Criterion-Referenced Tests.

Two tests were constructed by RBS staff to assess the extent to which content objectives of the program were achieved by the end of the field test. The two tests, used as posttest measures for experimental and comparison classes, are: What's Happening? and What Would You Do?

What's Happening? This test consists of eight cartoon illustrations depicting characters (e.g., friends, parents, grandparents) in situations presumably familiar to the experience of fourth grade elementary school children. Each cartoon is followed by a series of short-answer, open-ended questions designed to assess student learning in four areas: (1) identifying feelings; (2) identifying ways of expressing feelings; (3) demonstrating how to find out another person's feelings by asking that person; and (4) determining the cause of actions or feelings. Like the What Would You Do? test, this measure attempted to be free of program-specific language that could possibly bias evaluation results in favor of experimental pupils. Based on in-house reviews, this measure was considered to have "face" validity.

What Would You Do? The summative evaluation plan originally called for a measure of student achievement (i.e., "mastery test"), to consist of a selected sub-set of items from "Reviewpages." Each Reviewpage contained five items designed to assess information recall of program concepts taught by tape-led lessons. A preliminary set of items was selected (and modified as needed) from Reviewpages to be tested on students who were instructed in the *Heartsmart* program during the 1976 Pilot Test, and on a comparable group of non-instructed students attending the same school. The results of the test revealed that most items were too easy, consequently producing ceiling effects, and that the power of items to differentiate the two groups was negligible. The decision was made to drop the idea of a strictly cognitive measure of pupil achievement for purposes of summative evaluation.

A test called What Should Be Done? was then considered as a possible alternative criterion-referenced measure. This test was initially conceptualized and designed for the 1976 Pilot Test by Dr. Adrianne Bank from the Center for the Study of Evaluation (University of California at Los Angeles). It was necessary, however, to modify the content of test items substantially so that they better reflected the instructional goals of the field test version of the program. The name of the test was also changed to What Would You Do? to remove the implied dogmatic and moralistic tone of the program.

The revised test consists of 18 multiple choice items. Each item describes a problem-oriented situation involving young children and other persons such as friends, parents, and siblings. Most of these situations were created from "real-life" experiences of children who were involved in the 1976 Pilot Test. For each item children are asked what they would do in these situations. Three response options representing different kinds of actions are given: one option was intended to reflect an objective-referenced response; either or both of the remaining options (i.e., distractors) either were not related to program objectives or were statements of anti-objectives of the program (e.g., hiding feelings, guessing instead of asking another person's feelings, dependence on authority, physical aggression against another person). The course objectives presumably measured by this test relate to: (1) expression of feelings (e.g., anger, loneliness, fear); (2) translation of feelings into actions; and (3) expressing desires and requesting actions of another to accomplish desires.

A split-half reliability coefficient of internal consistency was calculated for this test by correlating odd numbered and even-numbered items. When the resulting correlation was corrected for test length by the Spearman-Brown formula, the obtained reliability coefficient was 0.795. The test was also factor analyzed in order to discover any underlying program-relevant dimensions which could possibly be developed into separate indices. Factor analysis produced only one psychogically meaningful factor which accounted for 93% of the variance in the test items. Based on the above sets of results, it was appropriate, then, to represent a subject's score on the test by the total number of correct answers.

The two measures described above, What's Happening? and What Would You Do?, were specifically constructed to assess selected aspects of program effectiveness. No other measures come closer than these two to meeting the summative evaluation needs of the field test. It is important to emphasize, however, that these tests do not purport to measure pupil behavior in actual interpersonal situations; they only presume to measure tendencies (or predispositions) toward behavior at least in the types of situations represented in both tests. The extent of any relationship between these behavioral tendencies and corresponding behaviors in real situations is not known. Program effectiveness must, therefore, be interpreted as the extent to which experimental students show evidence of being able to transfer more of that which is learned in the program than comparison students to a paper-and-pencil representation of real-life interpersonal events.

Standardized Measures.

Two additional measures were selected to describe and/or judge the program's effectiveness: (1) the Fundamental Interpersonal Relations Orientation Behavior Scales (FIRO-BC, Children's version); and (2) the *My Class Inventory*. These two measures and the criterion-referenced tests described above are primarily distinguished on the basis of content specificity. The latter two tests are more closely aligned with the instructional content of the program. In contrast, the standardized measures, used for pre- and posttesting, are less direct in their assessment of program fulfillments and, to some extent, are used in the field test as vehicles for exploring program-relevant differences between experimental and comparison groups.

FIRO-BC. The FIRO-BC is a self-report, paper-and-pencil measure of how one acts, or is disposed to act, *and* how one wishes others to act in interpersonal situations. It is the children's version of the FIRO-B scales used for adults. The same methodology was used to construct these two measures; they both rely on the same theoretical considerations and measure the same dimensions.

The FIRO-BC, like its parent version, is comprised of six, nine-item scales derived from three areas (i.e., needs) of interpersonal relations, Inclusion, Control, and Affection, and two dimensions, Expressed and Wanted, as shown in Figure 2:

		DIMENSIONS	
		EXPRESSED	WANTED
INTERPERSONAL NEEDS	INCLUSION	E - I	W - I
	CONTROL	E - C	W - C
	AFFECTION	E - A	W - A

Figure 2. FIRO-BC Scales,
as derived from Interpersonal
Needs and Behavioral Dimensions

The fundamental interpersonal needs based on the FIRO theory (Schutz, 1966) are as follows:

1. The interpersonal need for *inclusion* is the need to establish and maintain a satisfactory relationship with people with respect to interaction and association. Some terms that connote various aspects of a relationship that is primarily positive inclusion are "associate, interact, mingle, communicate, belong, companion, comrade, attend to, member, togetherness, join, extravert, pay attention to, interested, encounter." Negative inclusion is connoted by "exclude, isolate, outsider, outcast, lonely, detached, withdrawn, abandon, ignore."

2. The interpersonal need for *control* is the need to establish and maintain a satisfactory relationship with people with respect to control and power. Control behavior refers to the decision-making process between people. Some terms that connote aspects of primarily positive control are, "power, authority, dominance, influence, control, ruler, superior, officer, leader." Aspects of negative control are connoted by "rebellion, resistance, follower, anarchy, submissive, henpecked, milquetoast."

3. The interpersonal need for *affection* is the need to establish and maintain a satisfactory relationship with others with respect to love and affection. Some terms that connote aspects of primarily positive affection are "love, like, emotionally close, personal, intimate, friend, sweetheart." Aspects of negative affection are connoted by "hate, cool, dislike, emotionally distant, rejecting."

Two aspects of behavior are assessed by the measure: the behavior an individual expresses toward others and the behavior an individual wants others to express toward him/her - hence, six scales: Expressed Inclusion, Wanted Inclusion, Expressed Control, Wanted Control, Expressed Affection, and Wanted Affection.

The FIRO-BC scales were developed using the Guttman technique for cumulative scale analyses. Reproducibility coefficients rather than split-half reliability coefficients were therefore used as estimates of reliability. Reproducibility measures the extent to which a respondent's scale score is a predictor of one's response pattern. A high reproducibility coefficient for a scale indicates the scale is cumulative and presumably unidimensional. The usual criterion for reproducibility is .90, meaning that 90% of all responses to a given scale are reproducible from knowledge of scale scores. Table 2 shows a comparison between reproducibility estimates as reported by the FIRO-BC Technical Manual (unpublished), and those found on pre-tests and post-tests in the field test sample. Alpha coefficients of internal consistency for each FIRO-BC scale are also given.

These data indicate that reproducibility scores based on the field test sample are consistently lower than those reported by the test developer, and fall below the criterion of .90. The alpha coefficients tend to indicate that the FIRO-BC scales may not measure unidimensional tracts in this field test sample. It is possible to improve reproducibility, and as a result, the alpha coefficient, by re-scoring the test. The decision was made, however, to maintain test integrity on

Table 2

Comparison Between FIRO-BC Test Manual and Field Test Sample Reliabilities on FIRO-BC Scales

	REPRODUCIBILITY COEFFICIENTS			COEFFICIENT ALPHA	
FIRO-BC SCALE	Technical Manual	Field Test		Field Test	
		Pre-Test (N = 383)	Post-Test (N = 383)	Pre-Test (N = 378)	Post-Test (N = 382)
Expressed Inclusion	88	78	79	.63	.66
Wanted Inclusion	88	75	77	.66	.72
Expressed Control	90	83	86	.83	.84
Wanted Control	89	81	83	.76	.77
Expressed Affection	88	76	77	.61	.63
Wanted Affection	88	77	80	.63	.67

the assumption that any generally reliable differences between experimental and comparison groups could still be detected by these scales.

My Class Inventory (MCI). This measure is the elementary school version of the Learning Environment Inventory (LEI) designed for secondary school use. The MCI is an "instrument designed to measure the social climate of learning of a class as perceived by the pupils within it (Anderson, 1973, p.4)." The scales which comprise this instrument were developed from theoretical and applied social-psychological and educational research. Test construction involved both expert judgment in classifying items into construct categories and empirical testing.

The MCI contains 45 items distributed over five scales: Satisfaction (S), Friction (F), Cohesiveness (C), Competitiveness (CM), and Difficulty (D). The first three scales, S, F, and C, were selected to be used as measures of program outcomes, referenced indirectly to program objectives. The S scale appears to be a measure of generalized satisfaction with the class as a whole. The F scale was designed to measure the extent to which a classroom group is characterized by lack of mutual respect, bickering among class members, inter-group tension, and lack of group cohesion. The C scale is nearly the opposite of the F scale; a classroom scoring high on the C scale is made up of pupils who know and like each other, and who help one another.

According to its developer, the MCI is still undergoing development. The reported reliabilities on the S, F, and C scales of the MCI range from .54 to .77. Alpha coefficients calculated on the field test sample are compared with those reported in the test manual in Table 3 below:

Table 3

Comparison between MCI test manual
and field test sample reliabilities
on three MCI scales

My Class Inventory Scale	ALPHA COEFFICIENT		
	Technical Manual (N=655)	Field Test	
		Pre-Test (N=386)	Post-Test (N=383)
Satisfaction	.77	.69	.76
Friction	.70	.62	.66
Cohesion	.54	.57	.56

These results show that reliabilities of these scales are lower in the field test sample on the S and F scales and slightly higher on the C scale. Appropriate caution should be taken in judging evaluation results using these scales due to relatively low scale reliabilities.

VI. DATA COLLECTION AND ANALYSIS

This section describes methods of collecting data, and describes and discusses data analysis with distinction being made between summative and formative evaluation.

Data Collection

Table 4 contains information about (1) timing of data collection; (2) agent(s) responsible for collecting data; and (3) data collection procedures. Most of this information is self-explanatory. There is need, however, to describe classroom observation methods in more detail.

Observation. A total of 48 observations was made of *Heartsmart* program lessons: 36 of tape-led lessons and 12 of Heart to Heart talks. On the average, each school was visited for observation purposes nearly 7 times throughout the field test (i.e., 13-18 weeks). Although four RBS staff members visited at least two schools each, most observation data were collected by one individual, since it was thought that students and teachers would be less disturbed if they became accustomed to one person. Observation procedures were relatively simple: the observer would typically sit in the back of the room, and listen, watch, and record selected verbal and non-verbal events occurring in the classroom. Observation cues were provided by a series of directed questions. After taking extensive notes of classroom processes, the observer would prepare a written response to these questions based on the observation. Observers' classroom notes and answers to questions would then be collected and filed for subsequent use.

Data Analysis

It is here that the distinction between formative and summative

Table 4

Description of the Field Test Data Collection Method

Instrument Category	Instrument(s)	Test Administration Before	Test Administration During	Test Administration After	Test Administrator	Data Collection Procedure
Opinion Surveys	Teacher Opinion Surveys		X		--	Self-Administered by teacher
	Student Opinion Surveys		X		Teacher	For each class period five different subjects selected from teacher's class list[2]
Observation Forms	Lesson Observation		X		RBS Staff	Classroom observation
	Heart-to-Heart Talk		X		RBS Staff	Classroom observation
Interview Schedules	Teacher Questionnaire			X	RBS Staff	Face-to-Face interview
	Student Questionnaire			X	RBS Staff	Face-to-Face interview
Procedural Forms/ Guidelines	Teacher Data		X		--	Self-Administered by teacher
	Student Record Sheet		X		--	Self-Administered by teacher
	Course Schedule		X		--	Self-Administered by teacher
Criterion-Referenced Tests[1]	What's Happening?			X	RBS Staff	Test items read aloud to pupils
	What Would You Do?			X	RBS Staff	Test items read aloud to pupils
Standardized[1] Measures	FIRO-BC	X		X	RBS Staff	Test items read aloud to pupils
	My Class Inventory	X		X	RBS Staff	Test items read aloud to pupils

[1] Administered to both Experimental and Comparison Group subjects.
Time interval between pre-post testing was approximately 13 to 18 weeks, depending on the field test site.

[2] Exceptions: All subjects completed last Heart-to-Heart and group opinion survey forms.

evaluation is convenient and necessary to draw. Formative evaluation is primarily concerned with utilizing data for making program revisions. Summative evaluation is almost exclusively concerned in this report with: (1) utilizing data to describe and judge the outcomes of the *Heartsmart* program in relation to program goals and objectives; and (2) utilizing data to describe and judge contingencies as they may relate to (1). In this report formative evaluation involves experimental groups only, whereas summative evaluation involves making comparisons between experimental and comparison groups. Data analysis procedures which were employed to serve both formative and summative evaluation goals of the field test were therefore quite different and need to be discussed separately.

Formative Evaluation. Data analyses for formative evaluation purposes were performed by both logical and empirical procedures. Content analysis was the principal logical procedure and was used as the basis for analyzing intrinsic quality (i.e., social fairness, educational/psychological harmlessness) of the program materials. The results from the Consultant Review and Affirmative Action, reported separately in Chapter Four, were based on content analysis procedures. Consultant Review was guided by less formal, primarily judgmental procedures, whereas Affirmative Action followed a more formal set of guidelines and rules.

Descriptive statistics were used in the analyses of student achievement, program appeal/acceptability, and program implementation data. Varied analyses of the data provided most of the necessary information to determine program revisions.

Summative Evaluation. Analyses of summative evaluation data were performed principally by multivariate analyses of variance (MANOVA) and multivariate analyses of covariance (MANCOVA). In the case of pre- and post-test measures, a repeated measures MANOVA/MANCOVA was used. This type of statistical approach to summative evaluation has important advantages over other procedures (e.g., univariate gain-score analysis, analysis of variance/covariance). First, it performs the usual F-test for significant differences between groups on more than one dependent variable simultaneously. In the case of multiple dependent measures or indices on the same set of subjects, one is likely to find significant intercorrelations. In an "experimental" situation, finding a reliable difference on one dependent variable increases the chances of finding a similar difference on related variables. MANOVA, however, effectively partials out dependent variable intercorrelations and provides a more accurate assessment of group differences. In Appendix D scale intercorrelations among the FIRO-BC test and the MCI, and the correlation between the What's Happening? and What Would You Do? tests are given. The large number of highly significant correlations amply justifies the use of MANOVA. A further, related advantage of MANOVA, in combination with univariate statistical analyses, is that it maintains a consistent, moderately conservative experiment-wise error rate regardless of the magnitude of dependent variable correlations (Hummel and Sligo, 1971). The Alpha for determining the statistical significance of multivariate results was set at the .10 level; the relatively small group sample sizes involved in the statistical comparisons between experimental and comparison classes within each school permit a relatively non-conservative Type I error rate. The Alpha level for univariate results was set at .05 to take into consideration inflation of the error rate per comparison in performing multiple statistical tests.

Multivariate statistical results presented in this report were provided by the Statistical Analysis System (Barr et al., 1976) and Multivariance Version VI (Finn, 1977) computer program packages.

VII. LIMITATIONS/DELIMITATIONS

This section is motivated by the need to place the findings of this field test in a proper cautionary perspective. The purpose of this section is to provide a faithful accounting of limitations/delimitations of the field test study. Limiting/delimiting factors are considered in each of the following areas: field test goals, program goals, summative evaluation design, and instrumentation.

Field Test Goals

The major goals of the field test were to conduct both formative and summative evaluation. The question is whether field test results would be equally applicable to the final program version which includes data based-revisions. The credibility of summative evaluation must, therefore, be dependent, in part, on the nature and extent of these revisions. Actual program revisions, as will be documented in Chapter Six of this report, were extensive and necessary, but do not greatly alter the basic structure, organization, content, or implementation strategy conceptualized for the original design of the program. It is therefore assumed that if this field test were replicated on the final revised version of the program, it is probable that similar findings would be obtained.

Goals of the Program

A significant and continuous challenge to RBS evaluation staff was to be able to identify and comprehend the goals stated for the *Heartsmart* program. The problem of identifying the program goals was evident in the lack of complete correspondence between the content of the instructional materials and the goals for the program. The overall program goal is to enable students to conduct their interpersonal relationships in a more open, aware, and effective manner; this goal may be perceived as open to a variety of interpretations. As the field test progressed, it became evident that the program goals and objectives could not be adequately understood apart from the FIRO theory (Schutz, 1966). The teacher's manual states that the program is designed to teach students, among other things, to "be able to express (by words or actions) what they want or don't want (from other children and/or adults) in the areas of affection, being included in activities, or being in charge (Berzon, 1977, pp. 2-3)." Again taken from the teacher's manual, "goals of Units II and III involve legitimizing acceptance of, and enabling expression of Inclusion..., Control..., and Affection" (Berzon, 1977, p. 85). The logical choice of an assessment device to measure program effectiveness was the FIRO-BC scales which were designed to measure Inclusion, Control, and Affection. However, making specific predictions from the FIRO theory, or from the content of the program, turned out to be a complex task. This difficulty was not resolved in consultation with the program developer and the originator of the FIRO-theory, both of whom expressed uncertainty about how the FIRO scales would react to the program treatment. Both consultants suggested independently that the best use of the FIRO scales was as an exploratory device rather than as a measure of program effectiveness. Why was it so difficult to generate a set of testable evaluation hypotheses using the FIRO scales when the rationale and content of the program was based on the FIRO theory? The actual relationship between the FIRO theory and the instructional content for the program is not as strong or direct as program staff initially thought. The program does not attempt to teach students explicitly to express or want more or less "inclusion," "control," or "affection," but does provide an opportunity for students to experience these facets of interpersonal phenomena, particularly in the small groups. The influence of the FIRO theory on the *Heartsmart* program is more evident in terms of its organization rather than in terms of its instructional content. It would appear that the FIRO scales do not provide a strong basis for summative evaluation, contrary to RBS original understanding.

The point that is hopefully raised by this discussion is that the summative evaluation was approached with certain understandings of the program goals and the program's underlying theory. These understandings influenced the development and selection of evaluation measures, and presumably the interpretation of the results obtained in this study. Had another party conducted the summative evaluation, it is conceivable that its understanding of the program and its goals would differ from this one, as would its selection of appropriate evaluation measures, and perhaps, even its evaluation findings.

Summative Evaluation Design

In this field test, the assessment of program effectiveness was determined by the use of a quasi-experimental design. The chances of incorrectly attributing expected differences in performance between experimental and comparison classes to the effects of a program treatment are greater for this type of design than for true experimental designs. According to Campbell and Stanley (1963), there are two possible competing explanations: regression and the interaction between selection and maturation. Since samples were not selected on the basis of extreme scores on some measure, and since the sample selection procedures minimized student self-selection as a factor, regression and selection and maturation interaction are probably not very plausible alternative explanations. A more realistic concern relates to the effects of possible selection differences on the two criterion-referenced tests. It will be recalled that these tests were administered only as post-tests. If experimental and comparison classes systematically differed initially in these variables or related variables measured by these two tests, then any posttest differences could be attributed to those initial differences. Results from the criterion-referenced measures, whether they significantly favor or do not favor the experimental classes, must be interpreted in light of possible selection differences.

Instrumentation

Reliability data were presented for the What Would You Do? test, the My Class Inventory (MCI), and the FIRO-BC scales in Section V. Only the reliability coefficients obtained on the MCI scales were found to be undesirably low and, therefore, appropriate caution should be taken in interpreting results on these scales.

Earlier the relevance of the FIRO-BC scales as measures of program effectiveness was questioned. The FIRO scales in general were constructed mainly to do basic research on interpersonal phenomena (e.g., predict/explain social interaction under varying conditions) and to provide clinical information to individuals concerning their own interpersonal needs. These scales are frequently used in clinical-therapeutic settings to assist groups or individuals to learn more about themselves and their interpersonal behavior. (Occasionally the scales have been used to assess outcomes of intensive (e.g., encounter) group experiences.) The FIRO scales were used in this field test for a different purpose, which was as an evaluation device for detecting any meaningful experimental vs. comparison group differences as a function of an educational intervention. No attempt is made to analyze or interpret evaluation results from the FIRO-BC scales in terms of individual scores; all data are aggregated across individuals and it would appear that a large degree of psychological meaningfulness of the test results is lost as a result. Furthermore, an educational program, such as *The Heartsmart Adventures*, probably should not be expected to bring about deeper psycho-social changes (i.e., changes in interpersonal orientation) in children that might be affected by longer term and more intensive professional psychological services. The FIRO-BC scales may be inherently more sensitive to these latter type experiences.

Finally, the FIRO-BC scales for children have not been as widely used as the FIRO-B scales for adults. This field test is the only known attempt to use the FIRO-BC to measure the effectiveness of a school-directed instructional intervention. Its validity is therefore not based on much previous related research experience.

CHAPTER FOUR: RESULTS

This chapter consists of six sections: Consultant Review; Affirmative Action Report; Program Implementation; Program Appeal and Acceptability; Student Achievement; and Program Effectiveness.

I. CONSULTANT REVIEW

The procedures and results of consultant review are reported in this section.

Tasks and Procedures

In accordance with the requirements of the field test design, and with a desire to obtain external review of the program, it was determined that three to four consultants would be invited to review and evaluate the program. It was further determined that each consultant should be asked either to respond to specific questions, or to evaluate the program from a particular viewpoint so that no one consultant should be overburdened by too time-consuming a task.

The following questions were posed:

1. Is this program suitable for students aged nine to eleven years old? Is it equally suitable for all students in this age group regardless of race, ethnic background or socioeconomic status? Would students benefit from the program, or would they be harmed?
2. Would the program be an acceptable part of an elementary school curriculum?
3. Could the average classroom teacher carry out the program objectives given the materials provided?
4. The FIRO (Fundamental Interpersonal Relationships Orientation)

theory relates to the individual needs of inclusion, control, and affection. (Schutz, 1966). Is that relationship, and the program's interpretation of the theory valid and appropriate?

Since Dr. William C. Schutz originated the FIRO theory, he was invited to respond to question four above.

Ms. Patricia Ramsdell, Director of Elementary Education for the Upper Darby School District, was asked to respond to the first three questions.

Dr. Yvonne Agazarin, a clinical psychologist, was asked to respond to questions one and three.

The consultants were approached in February 1977. All three consultants agreed to review the program. Each received a complete set of tapes and a copy of the teacher's manual. Review questions were posed, but no formal forms were used. All reports were received by the end of July, and are on file at Research for Better Schools.

Report from Dr. William Schutz

The report begins, "My overall impression is one of overwhelming enthusiasm ... the program ... is creative and meticulous, theoretically sound," and later states, "I would anticipate great success, especially with an aware teacher."

Dr. Schutz makes three specific suggestions:

- Condense the lengthy lists of objectives.
- Revise the story for Lesson 19 so that it is oriented to power competition, authority and influence, i.e., control, rather than to attention which is an aspect of inclusion.

- Carry through or continue the series of lessons by teaching students to take responsibility for their own choices.

Dr. Schutz concludes with praise for the program and states that the presentation of the FIRO dimensions "is both accurate and entertaining."

Report from Ms. Patricia Ramsdell

In her report, Ms. Ramsdell states that she listened to all the tapes, read the student materials and teacher's manual, observed two lessons conducted during the field test, and interviewed some teachers and students involved in the field test.

Ms. Ramsdell states, "This is a great program and for that reason my suggestions are very minor." Her suggestions are quoted verbatim below.

1. Eliminate the part in which candy is given as it seems to suggest that it is alright to take candy from a stranger. Tape 1 and 10.
2. Eliminate suggestions of running away from home and running away to find self or recommend that the teacher discuss this as make believe and not an acceptable real life practice. Tapes 1 and 10.
3. On the tape that refers to the fact that it is o.k. to do things that are different add -- it is o.k. if it doesn't harm other people. Tape 15.
4. Tone down the child telling parents how he feels. In some of our homes a child would be punished for using that tone of voice. Tape 11.
5. Change suggested grade level to three or four to be determined by the sophistication of the students.
6. In the beginning of the tape vary the approach -- e.g. "Good morning," "Here we go again," "Hello again," "Hi Everybody!" I got so tired of the same opening phrase! All tapes.
7. Drop the term "speakeasy." It reminds me of prohibition stories -- the knocking on the door

intensifies this feeling. Tape 18.

8. In giving directions drop some of the "you shoulds". All tapes.
9. Change the review quiz to true and false rather than yes or no or remove quiz altogether. All tapes.
10. Design a follow through guide for teachers.
11. Add a lesson on responsibility to others -- e.g., sharing, carrying, caring, etc.
12. Design parent lessons so all of the family learns to express feelings.

Report from Dr. Yvonne Agazarin

Dr. Agazarin listened to all the tapes and read the teacher's manual.

She states:

> In my opinion the program is generally and specifically valid in meeting the overall goals stated and defined in the introduction of the teacher's manual.
>
> I found the program to be age appropriate as determined by the Fry readability scale ... in my opinion, the impact of the program would have a strong, positive influence on the psycho-social growth of the children who take it.
>
> I want to emphasize that my overall evaluation of this program is positive ... Because inner-city children are most subject to social deprivation and sensory deprivation and the concomitant impairment of the self-mastery that comes from this, I would consider it particularly important that this program be given to inner-city school children.

Dr. Agazarin makes many highly specific comments and suggestions, some of which are organizational or editorial. For the sake of brevity, only her major suggestions are summarized here.

Teacher's Manual. In general there is too much repetition, and the organization, for reference purposes, is poor. The style is inconsistent; all copy should be written directly to the teacher.

Insufficient training and/or direction is provided for the teacher on how to conduct Heart-to-Heart talks.

A warning to the teacher that students may experience difficulty with a given tape-led activity is inadequate. The nature of the difficulty should be identified and resolution strategies suggested.

Tape-led Lessons. Lesson 1: It is not accurate to teach children that a fast heartbeat means you're scared. Rewrite truthfully.

Lesson 5: Gamepages and tape-led activity are particularly good.

Lesson 7: The student competitors in the tape-led game do not need to be rewarded by applause.

Lesson 8: The OOPSER, a computerized robot, should not experience a nervous breakdown, neither should it experience feelings. "Children should not be encouraged to anthropomorphize machines."

Lesson 18: "Speak Easy is an unfortunate vocabulary phrase, and may even be an unfortunate concept."

Lesson 19: The characters known as the Hurts run away, and essentially practice blackmail in order to receive attention. "I'm uncomfortable with rewarding the blackmail ... the point needs to be achieved in some different way."

Lesson 21: In this Heart-to-Heart talk the following point should be included:

> It is important to tell people what you want, and to risk not getting it, rather than not tell, and make sure of not getting it.

Lesson 28: It would be preferable for the character Marsha Mellow to learn self-respect and self-esteem, rather than to rely on other people giving her "kisses and hugs" when she's feeling upset.

Lesson 30: "I like very much the 'hello-goodbye' teaching in this lesson."

Groups. "Random formation of groups would be less trouble for the teacher, and less risky in terms of idiosyncratic reactions to sociometric choice." If the method for forming groups is not changed, an exercise other than the "spaceship captain" should be used so that both task group and group maintenance are suggested, and the exercise topic relates more closely to *Heartsmart* lessons.

More explicit guidance is required for group leadership training in order to avoid "the imitation of benevolent autocratic behavior." Students should be allowed more opportunity to be group leaders.

The small groups could be structured functionally with rotating roles in the areas of inclusion, control, and affection. In a six-person group three pairs of students would take behavior roles relating to each area. Generally speaking, the inclusion roles would relate to maintenance through monitoring aspects of cooperation and comparative "communication input." The control roles would relate to task and administration. The affection roles would relate to maintenance being "supportive of the group members."

Feelings. Six pairs of "feelings" characters are presented in the story: sad, mad, glad, hurt, lonely, scared. Add "love." Optional activities should be included relating to shyness, selfishness, and showing-off.

General. Include a set of information pages which may be duplicated and given to parents or non-program teachers as and when necessary.

Revise the directions to the substitute teacher to allow for more input and involvement of the students.

(See the chapter titled Summary and Conclusions for further discussion.)

II. AFFIRMATIVE ACTION REPORT

This report describes procedures, considerations and data related to portrayal of characters in *The Heartsmart Adventures* (field test version, spring 1977). This analysis of characterization, in terms of sex, race or ethnicity, positive-negative depiction, and superordinate-subordinate social relationships was conducted in accordance with the RBS guidelines for affirmative action to determine what revisions (if any) should be made in order to achieve social fairness in portrayal of characters.

Task

The document, *Guidelines for Affirmative Action in RBS Products and Services* (RBS, 1976) states:

> Data will be gathered on both narrative and graphic aspects of a product wherever individuals are identified in a product. The characterization and group membership will be recorded according to the following categories:
> i. by sex
> ii. by race/ethnicity
> iii. by disability/handicap.

Percent of each group to be represented are suggested as follows:

i. by sex: 50% male, 50% female ± 10%

ii. by race/ethnicity:

Black	18%	± 5%
White	75%	± 10%
Oriental	2%	± 1%
Hispanic-American	2%	± 1%
Native-American	2%	± 1%
Other	1%	

Balance in characterization is to be determined by considering the following:

i. by positive-negative depiction
ii. by superordinate-subordinate social relationship
iii. by work, play or other activity engagements
iv. by abilities, interests, or other personal traits.

Once data has been collected and analyzed, it is suggested that...

> ...where the comparison indicates that certain groups were underutilized, the product units should be revised to comply with the standards for group representation.

Procedures

An affirmative action plan for *The Heartsmart Adventures* program, based on the RBS *Guidelines*, was written in July 1976.

During the spring of 1977, the first stage of the plan was carried out: data relevant to affimative action were tabulated, analyzed, and reported on.

An independent evaluator employed on a different RBS project reviewed the report resulting from stage 1, examined samples of the program materials, and wrote a brief report.

Minority members of RBS were asked to review the program and attend a meeting to discuss their impressions of program concepts and materials.

All findings were reviewed by the project coordinator for accuracy and/or appropriateness in order to determine what revisions could and should be made.

Only a certain level of objectivity is possible in individual evaluation of social fairness characterization. In order to reduce the possibility of biased subjective judgments, the first three stages of the analytical review process as described above were independent of the others, and both white and non-white persons were involved.

Limitations and Considerations

Analysis of group membership of *Heartsmart* characters is less extensive than suggested by the RBS *Guidelines* because no physical disabilities are portrayed and ethnic identity cannot be specified beyond skin color.

The dark skin and black hair that are given to some of the people illustrated are undoubtedly meant to suggest Afro-American, Asian, Hispanic, and/or Native American background, but it is impossible to determine the developer's intentions. Therefore, the analysis by category relates only to sex and white/non-white characterization (the term "non-white" being used to indicate all dark-skinned portrayals).

In the tables that follow, group membership is tabulated for main characters of the story, supporting characters of the story, and characters portrayed in *Heartsmart* activities.

Main character. A main character is defined as one who is illustrated in at least two story pages, and/or who has a speaking part totaling a minimum of twenty written lines.

Supporting character. A supporting character is defined as one who is illustrated in only one story page and/or who has a speaking part totaling less than twenty written lines.

Non-human characters. There is a total of twenty non-human characters portrayed in *Heartsmart*, of whom nineteen have speaking parts. Four of the non-human characters are animals; sixteen are fantasy creatures. Since all non-human characters have human characteristics, and are portrayed by humans in the dramatized tapes, they are included in this analysis.

Activities characters. Characters in the activities portions are portrayed on tape and/or by way of illustrations on the gamepages. Only the children, who comprise over 99% of the total number of these portrayals, are tabulated here. (The Feelings, Bessie Bluechip, and the Altogether Alligator have been considered in other tabulations relating to main non-human characters.) Two white hands, and representational human figures which are identified neither by sex nor by ethnic background, were considered to be of insufficient importance for consideration in this study.

Sex. For several of the non-human characters, only the voice provides a clue for the identification of sex. In some instances, the voice could be considered either male or female; therefore, the category "indeterminate sex" is included.

Ethnic identity. Illustrations provide the only means for establishing the ethnic identity of human characters. Because illustrations are not always provided for supporting characters, it was necessary to add the category "indeterminate."

Representation of Characters by Sex

Of the 202 characters in the program, 56.4% are male, 43.1% are female, and .5% are indeterminate (See Table 5). These figures suggest fulfillment of RBS *Guidelines* calling for 50% male, 50% female ± 10%. However, the figures alone do not adequately describe the balance - or imbalance - between the sexes. It is necessary to consider the extent of participation of the characters, and to separate human from non-human characters.

Characters in the activities are least important in as much as each character appears only once, has little depth of character, and is rarely identified by name. Of the 92 activities characters, 65.2% are male and 34.8% are female, indicating a small imbalance in favor of males.

Four of the supporting characters in the story are non-human; eighty are human. Of the non-human supporting characters, 3 (75%) are male, and 1 (25%) is of indeterminate sex. There are 38 (47.5%) male human supporting characters, and 42 (52.5%) female human supporting characters, indicating an acceptable balance by sex.

Table 5

Breakdown of all Characters by Sex and Ethnicity

	Total No.	Sex			Ethnicity		
		Male	Female	?*	Non-White	White	?*
Main Characters, Human	9	6 66.7%	3 33.3%		1 11.1%	8 88.9%	
Main Characters, Non-Human	17	7 41.2%	10 58.8%				17 100%
Supporting Characters, Human	80	38 47.5%	42 52.5%		19 23.8%	42 52.5%	19 23.8%
Supporting Characters, Non-Human	4	3 75%		1 25%			4 100%
Activities Characters, Human	92	60 65.2%	32 34.8%		17 18.5%	30 32.6%	45 48.9%
Total	202	114	87	1	37	80	85
Total (%)	100	56.4%	43.1%	.5%	18.3%	39.6%	42%

*? = indeterminate

The main characters in the story are most important. Excluding the teacher and the narrator, who have no depth of characterization, there are 26 main characters, of whom 9 are human. Six (66.7%) of the human main characters are male; 3 (33.3%) are female, indicating an imbalance in favor of males. Main non-human characters include 7 (41.2%) male and 10 (58.8%) female, indicating an imbalance in favor of females.

It is necessary to consider representation of each group of characters in terms of their roles and character traits. Such considerations are discussed in the following paragraphs.

Activities characters. In general, many of those characters have traditional stereotyped characteristics. Girls frequently have gushy, simpering voices; boys have deeper voices (even though none are meant to be more than eleven years of age). In one activity, two inactive girls are fearful of thunder; in the same activity, two active boys express anger in relationship to mathematical ability. Both boys and girls fight. The girls do not resolve the conflict and get into trouble with an adult; the boys resolve their conflict on their own. In a pair of similar activities, there are 3 boys and 3 girls. Three boys are illustrated as strongly masculine, while all three girls have curly hair, and one of them, holding a baseball bat incorrectly, is wearing a frilly dress.

Supporting non-human characters. (See Table 6) The three male non-human characters are portrayed on the audio-tapes by deep-voiced

Table 6

Tabulation of Supporting Characters in the Story by Sex, Ethnicity, and Extent of Participation

Supporting Characters	Sex			Ethnicity**			Number of Episodes
	M	F	?*	Non-White	White	?*	
Human							
Announcers (2)	●					●(2)	2
Barker	●					●	1
Herald	●					●	1
Driver	●					●	1
Guards (2)	●				●(2)		1
Nameless Boys (19)	●			●(7)	●(10)	●(2)	1
Nameless Girls (28)		●		●(8)	●(13)	●(7)	1
Named Boys (9)	●			●(4)	●(5)		1
Named Girls (7)		●			●(5)	●(2)	1
Nameless Women (7)		●			●(5)	●(2)	1
Nameless Men (3)	●				●(2)	●(1)	1
Non-Human							
Far Out Fish	●					●	1
Calvin Coolcat	●					●	1
Dragon	●					●	1
Piano Player			●			●	1

* ? = indeterminate

** The figures in parenthesis in the body of the table indicate the number of characters in a given group categorized by ethnicity.

actors. One of the three (Dragon) has very low visibility. Calvin Coolcat is a character who is completely self-contained and cares nothing about feelings. The Far Out Fish is an abrupt advisor.

Supporting human characters. (See Table 6.) Of the 80 supporting human characters, 63 are children, of whom 47 (19 boys and 28 girls) are nameless. These nameless children have low visibility. Those who are named are frequently sterotypic. For example, Vera the Voice appears to be a totally empty-headed person who is in love with her frivolous, caricatured "female" voice, and Susie Softshell is giggly, naive, and shy. Examples of named boys are Melvin Muscleman, a well-meaning bumbling character who tries to create a tough-guy image of himself, and Freddy the Face, "with a smile from ear to ear and brightly shining eyes." Boys discuss baseball; girls talk about parties. Boys get dirty, and are active, strong, solemn and frequently leaders. Girls are graceful, like to be admired for their appearance and hurt one another's feelings for petty or spiteful reasons.

The nameless adults have very low visibility.

There are 7 supporting characters with titles (announcers, etc., as listed in Table 6), of whom 5 have speaking parts. All 7 of these characters are males in occupations traditionally held by males.

Main non-human characters. (See Table 7.) Of the 17 main non-human characters, 12 are Feelings. There are six pairs of Feelings, a large one and a small one for each of the following: glad, mad, sad, lonely, scared, and hurt. All Feelings have almost equal visibility.

Table 7

Tabulation of Main Characters in the Story by Sex, Ethnicity, and Extent of Participation

Main Characters	Sex		Ethnicity			Number of Episodes
	M	F	Non-White	White	?*	
Human						
Jack	●			●		20
King of Hearts	●			●		8
Fast-Talking Howard	●			●		2
Daringly Different	●			●		2
Queen of Hearts		●		●		5
Marsha Mellow		●		●		4
Zookeeper	●		●			1
Freddy Finkletter	●			●		1
Doctor		●		●		1
**Teacher		●			●	24
**Narrator	●				●	24
Non-Human						
Mighty Glad	●					15
A Little Glad		●				15
Hopping Mad	●					15
A Little Mad	●					15
So Very Sad		●				15
A Little Sad		●				15
Lonely A Lot		●				15
A Little Lonely	●					15
Scared To Death		●				15
A Little Scared		●				15
Horribly Hurt		●				17
A Little Hurt		●				17
Asterisk	●					9
Oopser	●					3
Droop	●					2
A. Alligator	●					5
Bessie Bluechip		●				2

*? = indeterminate

** Characters are "outside" the story, and are not illustrated.

Each is characterized by the given name (feeling). Only four Feelings are male: Mighty Glad; A Little Lonely; Hoppy Mad and A Little Mad.

Of the 5 remaining main non-human characters, only one - Bessie Bluechip, with the characteristics of a night-club singer lacking self-confidence - is female. The Droop, a lonely, despondent creature, is the least visible of the 4 male main non-human characters. The OOPSER, a robot whose initials stand for Only Original Person Scanner, appears in three story installments, and has the characteristics of logical intelligence, assurance and empathy, although this last trait causes him to break down and cry when he begins to experience feelings. The Asterisk, a professorial character, is wise, calm and sensible. The Altogether Alligator, is a self-assured, friendly, and cheerful extrovert.

Main human characters. (See Table 7.) Three of the 9 main characters in the story are female. The Queen is self-effacing and although she is included in five installments, her visibility is very low. The Doctor, appearing in one story installment, is dependent upon the OOPSER. Marsha Mellow, first appearing under the pseudonym of Thistle E. Thorn, is initially domineering and very self-confident, but later breaks down, cries, and is dependent upon others for moral support. Marsha Mellow, appearing in four installments, is the most highly visible female in the program.

The most highly visible male is Jack, a boy of about eleven, who, as the story develops, learns to identify and express his feelings, and demonstrates characteristics related to leadership, independence, and empathy. Jack's father, the King, appearing in eight installments, is a stereotypic middle-class professional. Daringly Different, appearing in only two installments, has fairly high visibility, and is independent and adventurous. Fast Talking Howard is a self-confident extrovert. Freddy Finkletter is a slightly paler image of Howard. The zookeeper has little depth of character until he begins to cry because he thinks that others ignore him.

Representation of Characters by Race or Ethnicity

As stated earlier, it is impossible to determine specific racial or ethnic characters beyond the differentiation between whites and non-whites.

Of the 202 characters, 37 (18.3%) are non-white, 80 (39.6%) are white, and 85 (42%) are of indeterminate race. Of the 117 determinates, 31.6% are non-white, and 68.4% are white, which indicates compliance with the guidelines. (See Table 5.) Of the 85 of indeterminate race, 23 are non-human. This breakdown is based on illustrations; all of the voices on the audio cassettes sound white.

Activities characters. Of the 92 activities characters, 17 are non-white, 30 are white, and 45 are indeterminate. Characteristics and roles are represented fairly equally across the three groups.

Supporting human characters. Of the 80 supporting human characters, 19 (23.8%) are indeterminate. Among the 61 identifiable supporting human characters, 31.1% are non-white and 68.9% are white.

(See Table 5.) Of these 80 characters, 63 are children, of whom 19 are non-white, 33 are white, and 13 are indeterminate. Of these children, 14 are identified by name, 10 of whom are white, and 4 are non-white. The portrayals of two of the named non-white children may be perceived as unfortunate: Hi Ho Silvertongue is awarded a prize for oral expression, yet his acceptance speech is flowery, verbose, and repetitive; Donny - in a game - pretends to be a hippopatamus and is described as lazy, dirty and fat, the description being stated by other characters on the tape and reinforced by the illustration. Named white children are referred to in the earlier discussion related to representation by sex.

Although all 10 of the nameless adults are white, the absence of non-whites may be perceived as of little importance, since all 10 have very low visibility.

Of the 7 titled supporting characters, 2 are white and 5 are indeterminate. None have high visibility.

Main human characters. Only 1 of the 9 main characters is non-white, the zookeeper. This character has his title but no name. He is illustrated as over-weight, bald, round-faced, with a curly handlebar moustache, and wears a uniform. He is somewhat of a nonentity until he breaks down and begins to cry because he feels himself ignored. The white characters are described in the earlier discussion related to representation by sex.

Independent Review

Since the first stage of the affirmative action plan for this program was carried out by a white female, and since the findings especially those related to representation by race or ethnicity seemed to indicate unfairness in representation, two independent reviews were conducted.

Individual Review. The following review report was written by a female black evaluator, a professional staff employee of RBS. Since it is relatively short and certainly relevant, it is included here in its entirety.

> The following procedures were used in reviewing the Heartsmart Adventures. I first read the affirmative action plan and the report based on the field test materials to determine if they matched. I then read the introduction in the Manual, listened to two tapes and skimmed the student materials.
>
> In reviewing the affirmative action plan and the report based on the field test materials, I examined the general conventions listed on page 3 of the former to see if they were congruent with the latter and the student materials. I found that, in general, phrasing of directions were gender-free and that the illustrative examples of concepts, except when noted in the field report, were not sexually biased in terms of number, role or character trait. The activities seem to be gender-free and should appeal to a fourth-grade student population.
>
> The illustrations of human beings, although including persons of both sexes and racial groups, were monotonous. Black characters had the same facial features and expressions as their white counterparts. In fact, except for the color pigmentation given to the Blacks, they could be viewed as white!
>
> In addition, only one female (who just happened to be Black) was found illustrated with short hair. The rest of the females illustrated, both Black and white had long hair. This may reinforce the notion that only long and flowing hair is acceptable in our society.
>
> The role of the zookeeper is offensive. He represents, along with the Happy Hippo, all the negative stereotypes about Black people. He has no name, just

a title; he is callous and cold, ignoring the little feelings (portrayed in the cartoon as little white beings). He is illustrated as meek and sounds white on the tape. I would not change the zookeeper to a Black female, it is already bad enough that this character is illustrated as a Black male.

I find the statement regarding Hi Ho Silvertongue on page 9 of the TIH report* unfortunate. Why is it assumed that "this child with such flowery verbosity is a foreigner to most children, and particularly to inner-city Blacks." Is the assumption accepted by the authors of the report that inner-city Blacks are not exposed to flowery language? Is the assumption made that such children are not verbose or are not used to hearing such flowery verbosity? Or is it that the authors of the report have never heard Black children playing the dozens, or doing hand-jive or jumping rope to oral rhythms, which is flowery verbosity from a different cultural orientation. I recommend that the language of the report be changed.

The general purpose of this program, emphasizing as it does that people are rewarded for expressing their feelings, offers potential conflict for children from nonmainstream communities, especially when the expressions of those feelings are made to outsiders (the school community of orientation as represented by the program and its teachers.) This expression of feelings is fraught with danger because it can be seen as threatening to the child's functioning within his home and community if the teacher is not overly sensitive to the God-like role he or she is implementing. By not allowing parents to observe the process being taught, an image is created of the program intervening in a relationship established since early childhood (between parent and child) which may not be understood or appreciated by the mainstream culture.

My basic objection to the program does not lie with the inadequacy of the illustrations or the stereotyped roles portrayed by minority group members but with the underlying value orientation of the program — that in order for children to become functioning human beings they must learn how to communicate their innermost feelings and thoughts to others. This could be quite detrimental to young Blacks growing up in a hostile racist country such as ours.

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*Refers to an early draft of the preceding pages of this section.

Group Review. The third stage of the affirmative action plan called for the assistance of non-white persons. Seven Black employees of RBS — 3 male and 4 female — one of whom was professional staff, 3 executive level support staff, and 3 general support staff, agreed to participate in an informal review.

Each participant read the Information Pages (Appendix A) before attending a meeting. The meeting was chaired by the person who conducted the first stage of the affirmative action plan, but she did not state opinions nor share her findings. Participants examined *Heartsmart* materials and listened to excerpts from three audio tapes. Subsequent discussion was guided by a series of questions.

Participants were interested in the program and generally supportive of its goals. However, they expressed concern with possible value conflict and suggested that children be taught that the expression of feelings is natural and not wrong, but that it is not always rewarded, and one must be sensitive to the situation in which such behavior is appropriate and even possible.

There were also criticisms of black characterization but participants of the meeting unanimously agreed that adequate revisions of black characterization could be made within the existing format of the program. A summary of their recommendations follows:

General:

- Give blacks and females greater visibility.
- Give members of these two groups stronger characterization, and eliminate stereotyped roles.

- Give identity to at least one black female.
- Re-do art work so that blacks look black.
- Include black actors to play black roles.
- Include other ethnic group members.

Main Characters:

- Have one more black - perhaps one of the TV or radio persons.
- Give one female some spirit - perhaps Daringly Different could be female.
- Do not have the zookeeper black; this character is not strong or admirable.

Supporting Characters:

- Make more of the identified characters black and female.
- Get rid of gushy female voices.
- Change images within the animal game. Have both boys and girls choose animals with "feminine" and "masculine" characteristics.
- Take out the girls' disgust with dirt.
- Change the Happy Hippo - he should not be black.
- Change Hi Ho's speech and name. His speech should be expressive but realistic; a black person should record it.
- Use more female voices.

Summary and Recommendations

The quantitative data and opinions presented indicate that representation of characters by sex, race or ethnicity, and behavioral characteristics is socially unfair in some cases, and affirmative action should be taken to ensure a better balance.

In order to achieve social fairness in all of the foregoing areas, illustrations of non-white characters should be redrawn or newly created; some characters should change sex or ethnicity; some characters should be conceptually revised by changing dominant behavioral characteristics; and all stereotypic characters should be carefully evaluated in order to determine if their representation is contrary to the intent of the affirmative action guidelines.

Most of the recommendations made by individual and group reviewers should be implemented.

(Revisions made are described in Chapter Six.)

III. PROGRAM IMPLEMENTATION

Information pertaining to program implementation refers to the extent to which suggested implementation procedures were followed at each of the individual sites. Teachers were instructed on these desired implementation procedures by the teacher's manual, and also during the teacher training session and at informal talks during site visits. Information for this section was derived primarily from observational data and to a lesser extent from teacher and student self-report materials.

In Chapter Two of this report program implementation is described as presented in the teacher's manual. However, for the field test, it was necessary to modify or clarify some of the directions given in the manual. For example, although the manual allows for program participation by substitute teachers, it was agreed that substitute teachers should not participate in the field test. Another change related to scheduling; field test teachers were asked to complete two to three *Heartsmart* lessons and not one per week as suggested in the manual.

In order to clarify the contents of this section it is necessary to consider a variety of factors and variables. The following assumption is made:

- Given the program materials and written and oral directions as to how those materials should be used, the teacher interprets the directions and develops dispositions which lead to covert or overt decisions relating to the nature and extent of deletions and/or additions the teacher makes and the degree of emphasis the teacher puts upon each direction. Thus the teacher influences student achievement and program effectiveness on several variables, including: time spent on tasks; cognitive and affective understanding of and disposition toward the program and parts of the program; disposition toward the students; and nature and extent of interaction between and among the teacher, the students, and parts or elements of the program.

Although this assumption is highly relevant in attempting to determine the impacts of differences in program implementation among classes, it must be treated cautiously, because the field test was not designed to evaluate teachers, and because observational data of classroom activities are somewhat subjective. However, the assumption may be used as a conceptual framework for this section, and every effort is made to be as objective as possible in interpreting observational data, most of which are supported by teachers' self-reports.

Materials

All teachers received identical program materials within the same two week period approximately 10 days before the teacher training session, and 4 weeks before the program was used in the classrooms. With the exception of the teacher's manual, all materials were used as intended. The administrative burden on the teacher to check and distribute the loose student journal pages for each lesson was considerable, but did not cause major problems.

The exception referred to above, the teacher's manual, involves directions, discussed below.

Directions

All teachers were given identical initial directions from two sources; the teacher's manual and the teacher training session. During the latter, certain points given in the manual were clarified so that teachers understood that field test directions over-ruled some manual directions, such as those described earlier in this section.

There were three categories of directions.

- Imperative directions related to scheduling, sequence and completeness of implementation of structured tape-led lessons and Heart to Heart talks.
- Guiding directions related to the teacher's role during all lessons, especially the Heart to Heart talks, and to general administrative tasks.
- Discretionary directions related to the use of optional teacher-led activities and songs.

Supposedly, the teacher's manual and training session provided sufficient imperative, guiding, and/or discretionary directives so that the program would be implemented as intended. To a large extent this was so. However, there were variations in interpretation by the teachers, and in the ways in which the teachers' dispositions (toward the program, the directions, and the students) affected program implementation.

Table 8 summarizes the directions given and the implementation of these directions for each site. In general, all sites followed the suggested implementation procedures very closely. All sites administered the program at least twice a week, presenting all lessons completely and in the given sequence, used a fair to large number of optional activities to supplement instruction, and played the *Heartsmart* songs at appropriate times.

Teachers from all but one site (E) had relatively little difficulty finding an acoustically optimal, or at least satisfactory, location for the tape recorder in their classrooms. The classroom at site E did not lend itself well to a taped presentation, and, consequently, the teacher reported that most students could not hear the contents of the tape as clearly as possible. No sites reported having had outstanding mechanical or operational difficulties with the tape recorders.

For the most part, teachers from all sites ensured that there was a minimum number of distractions during the tape presentations. The distractions that did occur were relatively minor (e.g., fire drills,

Table 8

Suggested and Actual Implementation of Program During Field Test

Suggested Implementation		Actual Implementation At Site						
GENERAL 2 to 3 lessons are completed per week.	I	A 3 per week	B 2 per week	C 2 per week	D 2 per week	E 2 per week	F 2 per week	G 2 per week
Optional activities are used at teacher's discretion.*	D	8 3 3	9 7 7	4 3 2	7 3 5	5 0 0	8 3 0	8 6 4
Heartsmart songs are used at teacher's discretion.	D	All sites used *Heartsmart* songs to some degree. Sites A, B, D, F and G used the songs extensively.						
TAPED LESSONS Teacher positions tape recorder in room for best acoustic result.	G	Site E was the only site to have repeated problems with acoustics.						
Teacher allows for minimum distractions while tape is being played.	G	No outstanding distractions were reported or observed for any sites. Minor distractions included fire drills, voices over the intercom and disruptions by students.						
Teacher acts as a "facilitator" during tape-led lessons.	G	Teachers from all sites were responsive to student needs and offered clarification of tape directions, stopping the tape when necessary. Interferences were kept to a minimum.						
HEART-TO-HEART TALKS Talks take approximately 25 minutes to complete.**	G	35 min.	35 min.	30 min.	34 min.	35 min.	40 min.	40 min.
All main points and questions covered.	I	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Students sit in a circular formation.	I	No, Ss sat in usual class arrangement.+	Yes	Yes	No, Ss clustered around T.	No, Ss clustered around T.	Yes, at times; otherwise clustered around T.	Yes
Teacher relates rules for talks at beginning of discussion.	I	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Teacher acts as a discussion leader and facilitator during the talk.	G	over-extended role of facilitator	Yes	Yes	Yes	Yes	Yes	overly cognitive role

I = imperative directions
G = guiding directions
D = discretionary directions

*Figures reported are the number of optional activities used for Units I, II, and III, starting with Unit I in the upper left-hand corner.

**Figures reported are averages.

+Desks were in rows or in groups of three and four.

voices over the intercom, and brief disruptions by students). Teachers also followed the suggested guidelines and acted as facilitators during the presentation of the tapes. Whether they circulated around the room, or sat at their desks or at empty pupils' desks, the teachers were very attentive of the tape and, as recommended, were responsive to student needs with respect to direction clarification.

The Heart to Heart talks were completed as scheduled, with teachers covering the given content and using more time than had been planned. Although not all sites conformed to the suggested circular formation, all but one site used some kind of informal "group-oriented" arrangement. All teachers were conscientious about relating and/or eliciting the rules of the Heart to Heart talks before the beginning of the discussions. The time spent on these rules, as well as the formality of the presentation, waned a little as the program progressed and students became more familiar with the format of the talks.

Interpretation and Disposition

The preceding discussion indicates that all teachers understood the directions given, and followed those directions fairly closely. However, since there were "open" areas for which no directions were given, variation among classes became apparent to observers. It was decided that no additional directions should be given to teachers unless a variation was considered harmful. No variation was so considered. In some instances teachers asked program staff if such variations as they had introduced were acceptable. The standard answer given was that if the teacher considered the variation desirable, and if it did not contradict given directions, it was acceptable.

For the most part variations seemed to be dependent upon the teachers' dispositions toward the program, and occurred immediately after a tape-led lesson, during Heart to Heart talks, and in the optional teacher-led activities.

Tape-led Lessons. As stated before, all teachers implemented the tape-led lessons as directed. Some variation was observed during the part of the lesson in which the teacher on the tape directed students in a pencil and paper activity. In some classes the students did not hear or did not understand the taped directions so that the classroom teacher needed to stop the tape and explain the directions. In most classes such occurrences were rare, but in one class the occurrences were more frequent.

The major, unanticipated variation to tape-led lessons occurred after the tape had ended. The only (discretionary) direction given to teachers stated that optional activities could be conducted immediately after a tape-led lesson. Sometimes teachers did conduct an optional activity. More frequently, teachers chose to summarize the lesson and conduct a discussion. These conclusionary activities were known informally as "wrap-ups."

Table 9 summarizes the average "wrap-up" for each site in terms of time spent, frequency, and content. In examining this table it is important to remember that no directions were given for "wrap-ups," and

Table 9

"Wrap-ups" Following Tape-led Lessons

SITE	AVERAGE TIME SPENT	FREQUENCY	USUAL CONTENT
A	30 minutes	Always	Comprehensive: summary; discussion; optional activities
B	5-10 minutes	Almost Always	Limited: summary; discussion
C	Varied, usually less than 15 minutes. Sometimes none at all.	Varied	Varied: summary; discussion; occasional optional activities
D	Varied, usually 15-30 minutes	Always	Comprehensive: summary; discussion; optional activities
E	None	None	None
F	Varied, 10-30 minutes	Always	Varied: summary; discussion; occasional optional activities
G	5-10 minutes	Infrequent	Limited: summary; discussion

that some teachers conducted optional teacher-led activities separately from the structured lessons.

In general, "wrap-ups" consisted of summaries which were similar to the tape-led reviews, and brief discussions which were often based on discussion points given in the optional activities suggestions.

Since these "wrap-ups" were unanticipated by program staff and therefore were not dealt with by directives, it could have been possible for teachers to influence the desired program impact negatively by introducing conflicting concepts. Initially this was a real concern, related primarily to potential harm to the students. However, since teachers understood the concepts of the program and seemed disposed to agree with the goals and objectives, they did not introduce conflicting concepts. Observational data indicate that some form of "wrap-up" was beneficial, both in terms of allowing for active participation of the teacher and students (in an otherwise somewhat passive learning situation), and in allowing for clarification and practice of program concepts.

Heart to Heart talks. As explained in Chapter Two, there were six teacher-led Heart to Heart talks interspersed among the twenty-four tape-led lessons. Imperative directions included discussion rules for the students, seating arrangements, content in the form of main points and questions, and a strong implication that all main points and questions should be covered. Guiding directions included time (20-25 minutes), and "rules" for the teacher: repeat and reflect students' statements; give support; vary questions; and keep discussion focused. Discretionary directions suggested that anger could be discussed, focusing on generation of ideas of acceptable ways of expressing anger. Also, in the "trouble-shooting" section of the manual, some suggestions were given for shortening or lengthening the talks, for increasing student participation, or for dealing with discipline problems.

It became apparent at the teacher training session, after teachers had read the manual and discussed the Heart to Heart talks with the developer, that some teachers were not confident in their comprehension of what was to be accomplished in the talks, and were disposed to be wary of anticipated student reactions and/or nature of participation in the talks.

As the field test was intended as a "hands-off" evaluation situation, it was decided that observers would offer further guidance only if a teacher asked directly for assistance and/or if the observer judged that students were being harmed by the content or implementation of the talks. Almost no such guidance was found to be necessary.

As shown in Table 8, two imperative directions, followed by all teachers, relating to Heart to Heart talks were those relating to the students' discussion rules, and to covering all main points and questions. The guiding direction relating to time was probably unreasonable if all content was to be covered and all students encouraged to participate. The guiding and discretionary directions relating to the teacher's role were the most problematic.

During the Heart to Heart talks teachers were or felt free to develop their own roles around the "skeleton" model offered in the guidelines. A wide range of teacher roles was thus possible, albeit not necessarily intended. Most teachers dealt with the Heart to Heart talks appropriately, acting as discussion leaders and facilitators, articulating and also elaborating upon the main points of the Heart to Heart talks, and allowing for personalization of the concepts. One teacher, however, followed the Heart to Heart "script" very closely, elaborated very little, and made the talks assume the form of cognitive exercises, in which the students practiced *Heartsmart*-related concepts, yet did not extensively relate these concepts to their own lives. In contrast, a teacher at another site greatly extended the role of facilitator and functioned in some ways as a "therapist," focusing on solving the children's personal problems in addition to providing opportunities in which the students' feelings — as they related to their problems — could be aired and discussed. Many teachers conducted additional Heart to Heart talks wherein students discussed classroom problems. Private Heart to Heart talks were also requested by students at several sites.

Observational data indicated that all teachers took the Heart to Heart talks seriously, but each teacher was disposed to create a different atmosphere from the others. For instance, although all teachers were receptive toward students' contributions to the discussion, some teachers encouraged informality, while others maintained a traditional, somewhat cognitive approach to the lesson concepts. All teachers would ask a question to clarify the point made or to lead the student closer to the focal point. Occasionally a teacher would tend to sermonize. These, and other differences are subtle and seemingly minor. However, the way in which a teacher conducted a Heart to Heart talk clearly affected the nature of the interaction among students during the talks, and possibly had an impact upon the overall effect of the program.

Because of the lack of definitive directives to the teachers about the Heart to Heart talks, the possibility of potential harm to the students was fairly high. For instance, a teacher (without training in clinical psychology) playing the role of diagnostician or therapist could have manipulated students' feelings, possibly causing psychological harm. Also, a teacher with strong views on social desirability of certain behaviors could have caused psychological harm by advising students that certain related feelings and behaviors were "wrong." However, although program staff observers were concerned about such possibilities, data indicate that most teachers did not manipulate or judge their students in these potentially harmful ways. Teachers did take it upon themselves to "localize" the contents of the Heart to Heart talks, by emphasizing some points and skimming others. For instance, at least one teacher responded to a student's direct question by stating that the child should, "Do what's best for you. Something that works for Jack in the story might not work for you at home." Such a statement was not in conflict with the program, but was an example of the ways in which teachers judged the concepts as they applied to their students.

Optional activities. The discretionary directive encouraged teachers to use optional activities, but teachers were free to choose to use none at all.

As shown in Table 8 all teachers used some optional activities, either as part of the "wrap-up" or at another time. Several teachers made up their own activities in which *Heartsmart* concepts were linked with other curricula. Some of the teachers modified or expanded activities suggested in the manual. Some activities were used as given.

In general, the strongest factor influencing the selection and use of optional activities appeared to be the teachers' dispositions toward the students. Thus, a teacher disposed to believe that her students needed "active" learning would choose or generate activities involving students in improvised dramatization. Another teacher disposed to believe that her students needed practice in written expression would assign some form of written work. These two examples serve as illustrations only, and are not comprehensive.

In referring to the optional activities section of Table 8, it is important to note that the figures given for each site for each unit of the program relate to frequency, not quantity. Thus, for instance, at site A in Unit I the teacher reported using optional activities after 8 of the 12 lessons in that unit. This means that at least 8 activities were used; it could mean that more than 8 were used.

Teachers were asked to identify and to record optional activities used. However, only three such schedules are available.

At school B the teacher reported using a total of 63 optional activities, all of which were suggested in the manual. Time taken for each activity ranged from 10 to 30 minutes. When discussion points were suggested in the manual, the teacher nearly always used them. Most other activities selected required students to write or draw.

At school C the teacher reported using a total of 15 optional activities, allowing from 5 to 50 minutes for each activity. The teacher used all the handout pages given in the manual, some of the given discussion points, the songs, and a few pencil and paper activities.

At school G the teacher reported using a total of 32 optional activities, allowing 10 to 45 minutes for each activity. Most of the selected activities required students to write or draw.

Observational data indicated that at schools A and D many optional activities had been used since a great deal of program-related student work was on display. At school F the teacher initiated several program-related activities of her own in addition to some suggested in the manual. At school E students were involved in very few optional activities.

Impact Upon Achievement and Effectiveness

As stated in the assumption presented near the beginning of this section, the teachers' interpretation of directions and disposition toward the program and her students influence implementation which in turn influences student achievement and overall program effectiveness.

Data are not available on all variables for all sites. However, some generalizations may be made.

- Time on task: School A spent the most time on the program, followed in ranked order by schools D, B, F/C, C and E.
- Cognitive comprehension: All teachers demonstrated complete, accurate comprehension of the program and the tasks to be performed by teachers and students.
- Disposition: Teachers demonstrated very little differences in their dispositions toward the program (see Section IV of this chapter). Dispositional behaviors were more apparent in teaching styles, particularly during the Heart to Heart talks, and ranged from an open warmth showing genuine interest in the students to a somewhat closed coolness close to boredom.
- Interaction: In the Heart to Heart talks the traditional student to teacher interaction was common in all schools although one teacher encouraged student to student interaction. In the tape-led lessons of Units II and III students were required to interact within their small groups. This interaction was appropriate and positive in all schools. However, when a group leader was over-bearing or ineffective, the behavior of members was influenced, resulting either in quarrels or in lack of task orientation. In all schools, the teachers intervened in group interaction only when it was apparent that such intervention was necessary.

Without reference to other data it would seem that the way in which each teacher implemented the program had some influence on the impact of the program. In as much as all imperative directions were followed relatively closely, all guiding directions were interpreted fairly accurately, and all discretionary directions were duly considered, it can be said that all essential parts of the program were implemented as intended and the variations in implementation should have no negative effects on achievement and effectiveness.

IV. PROGRAM APPEAL AND ACCEPTABILITY

Results relating to appeal and acceptability reflect the reactions of the students and teachers to the program materials and course of instruction. Reactions are reported in terms of the following categories: student reactions to the program; and teacher reactions to the program.

Student Reactions to the Program

Following each lesson five students in each class completed appropriate opinion surveys. All students in each class completed the last opinion survey relating to Heart to Heart talks, and all students completed the survey relating to groups.

Tape-led Lessons. The results of the analysis of responses given by students to items asking them to rate the taped stories and games according to appeal are presented in Figure 3. Students could select responses from four alternatives: (1) a lot, (2) some, (3) a little, and (4) not at all. Only the percents of students who reported having liked the stories and games either "a lot" or "some" (the two most positive

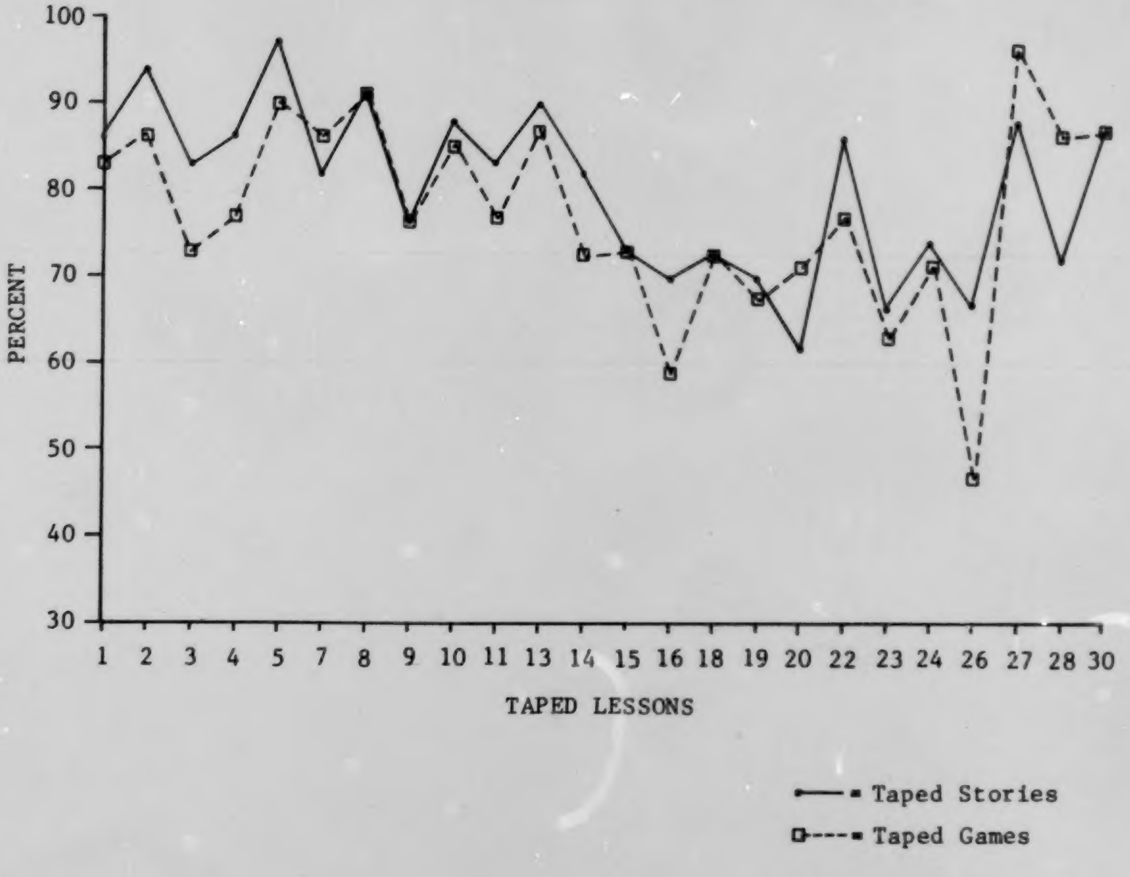

Figure 3: Percent of students reporting to have liked the taped stories and games either "a lot" or "some" shown as a function of lessons.

dimensions of the scale) are reported. Presentation of these positive reactions was considered to be a good indication of program acceptability.

Student reactions to the stories and games were very similar. The mean percentage of students having liked the stories either "a lot" or "some" for all three units was 80.4 with a range of 61.7% to 96.6%. Analyzed by unit, the means were 86.8%, 74.3%, and 76.9% for Units I, II and III, respectively. The mean percent of students having liked the taped games for all three units was 77.2 with a range of 58.8% to 96.1%. Means for each unit were 82.5%, 71.7%, and 74.5%, respectively. Positive reaction to the stories and games as reflected in the percentages were, thus, initially very high (their highest), gradually declined until reaching their lowest levels toward the middle and end of Unit II, and then increased again in the later lessons of the course.

Figure 4 presents the results of the analysis of student ratings of the taped games with respect to difficulty. Students could select from two alternatives: (1) easy and (2) hard. The mean percent of students finding the games to be easy was 94.7 with a range of 78.7% to 100%. The individual unit means were 94.5%, 92.8% and 97.5%, respectively.

Analysis of the comments to an open-ended question asking the students to write in anything they wanted to say about the game of the day yielded three categories or characteristic patterns of responses. Students expressed:

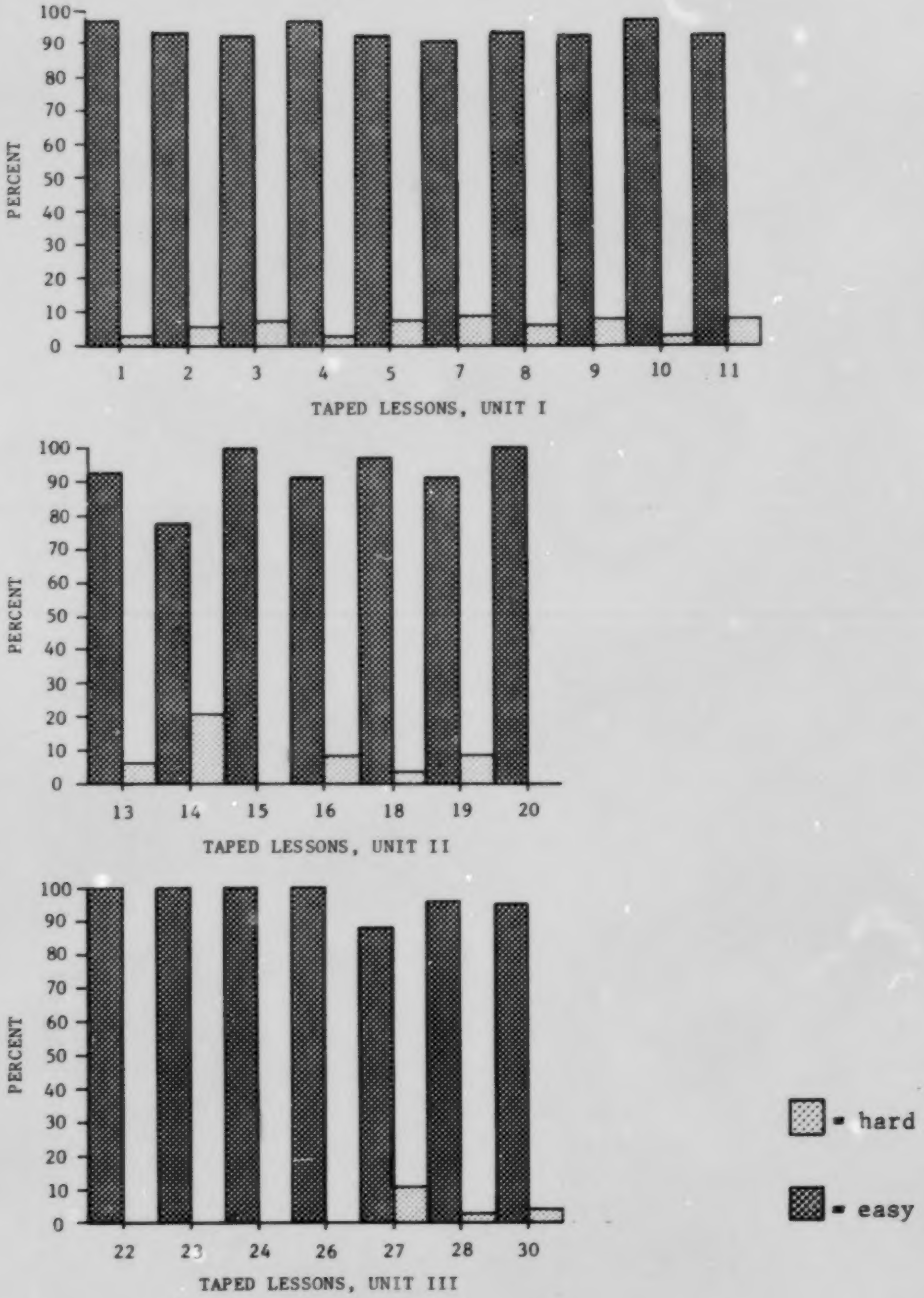

Figure 4: Percent of students rating taped games as "easy" and "hard" shown as a function of lessons by Unit.

1. an adamant liking for the games;
2. an appreciation of the fact that the games offered them opportunities in which to learn to express their feelings; and
3. a desire for the games to have been more exciting and challenging (less easy).

Samples of students' responses from these three categories are presented below. Samples are representative of all sites.

Representative Sample of Student Responses to: "Write in anything you want to say about the game today."

Liking for the games:

- They were really easy, fun and neat.
- I liked it a lot.
- I like the game and the work pages because it's lots of fun and I like coloring and drawing.
- The game was fun.
- It was fun. It really made me happy and I'm glad about the whole thing.
- It was fun and different.
- I think it was great.
- I like it a lot. It is fun. I am glad we take the program.

Appreciation for the opportunity to learn how to express their feelings.

- I liked when we talked about our feelings.
- It was a fun thing to think about your feelings.
- It told a lot about people and feelings. It was fun.
- I think it will help express your feelings.
- It was teaching me more feelings than I thought, and thank you for giving us the *Heartsmart Adventures*.
- I like it very much and it is fun and helps me.
- I want to thank the people who invented *Heartsmart*. It's a good way to find your feelings.
- It was fun and helpful to some problems.

Desire for the games to be more exciting and challenging.

- It was a little boring. It could be more interesting.
- It could be improved by making it more exciting.
- I think that the games were easy but still fun.
- It was a little too easy but still fun.
- The game was alright. It was a little boring but it was fun.
- The games are too easy.
- Can't you make it harder?

Heart to Heart Talks. The results of the analysis of responses given by students to an item asking them to rate the Heart to Heart talks with respect to appeal are presented in Figure 5. Students could select responses from four alternatives: (1) a lot, (2) some, (3) a little, and (4) not at all. Again, only the percentages of students who reported having liked the Heart to Heart talks either "a lot" or "some" (the two most positive dimensions of the scale) are presented. The mean percent of students who liked the talks either "a lot" or "some" was 82.3 with a range of 63.6% to 97.0%.

The results of analysis of a second item asking the students to rate the individual Heart to Heart discussions with respect to "how interesting" they were are presented in Figure 6. Students could select responses from four alternatives: (1) very interesting, (2) a little interesting, (3) not too interesting, and (4) not at all interesting. The mean percent of students rating the contents within the two most positive dimensions (very interesting and a little interesting) was 85.1 with a range of 69.6% to 90.6%. The appeal of the Heart to Heart talks for the students with respect to both "liking" and "interest" was

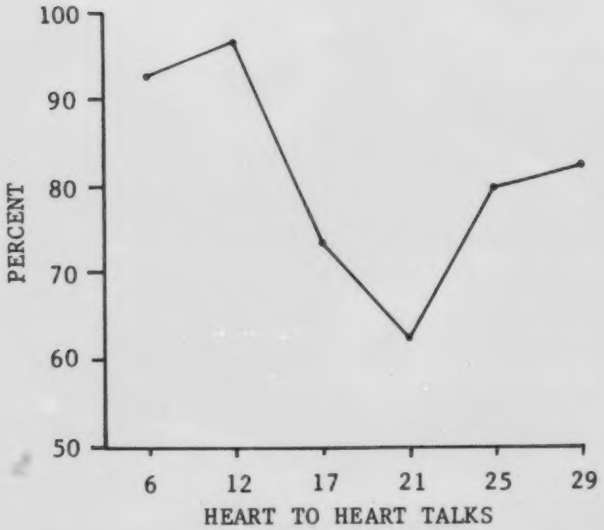

Figure 5: Percent of students reporting to have liked the Heart to Heart talks "a lot" or "some" shown as a function of the talks.

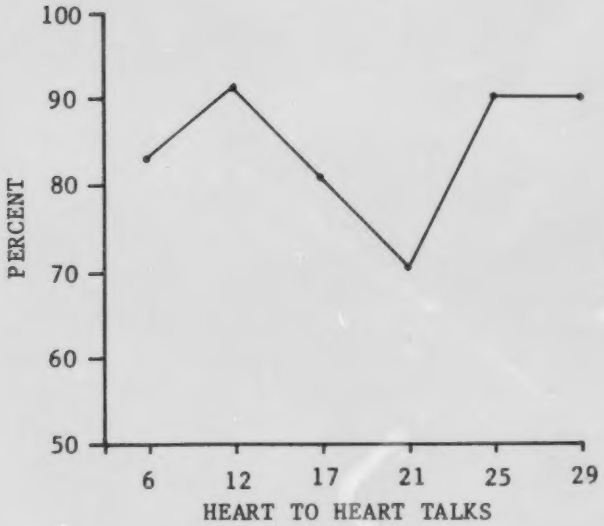

Figure 6: Percent of students finding the content of the Heart to Heart talks to be "very interesting" or "a little interesting" shown as a function of the talks.

thus initially very high, dropped off considerably until reaching the lowest point in Lesson 21, and then increased rather sharply for Lessons 25 and 29. It should be noted, however, that figures for Lesson 21 never fell below 60% for "liking" and 70% for "interest."

Students were also asked to report their "strongest" feeling during the Heart to Heart talks. The results of the analysis of these responses are presented in Table 10. Students could select from six responses: "I was happy," "I was mad," "I was sad," "I was shy," "I felt embarrassed," and "I felt like laughing." Students could also write in their own responses. The mean percent of students having felt happy during the Heart to Heart talks was 52.3, which is by far the most frequently reported feeling. The mean percents of students having felt mad, sad, shy, embarrassed, and "like laughing" were 7.5, 2.4, 6.9, 5.8 and 15.2, respectively. Students also wrote in a number of responses. These were categorized if they appeared for more than one talk. (The computed percent figures took all responses — given and offered — into account.) On an average, 3.2% of the students wrote in that they felt "bored" during the Heart to Heart talks, 1.3% felt "interested," .73% felt "weird," and .73% felt "glad." Responses given for only one of the Heart to Heart talks are listed in the right hand column of Table 11. These included such feelings as "normal," "scared," "surprised," "bad," "sleepy," "hurt," "like not paying attention," and "like helping a person." Lessons 21 and 25 had the least number of happy feelings reported.

In addition, students were asked if they wanted to talk more during

Table 10

Students' Strongest Feelings During Individual Heart to Heart Talks in Percent.

	STUDENTS' STRONGEST FEELINGS											
	Responses Given							Responses Offered				
Heart to Heart Talk	N	I Was Happy	I Was Mad	I Was Sad	I Was Shy	I Felt Embarrassed	I Felt Like Laughing	bored	interested	weird	glad	Other
6	32	59.4	3.0	0.0	6.3	9.6	12.7	0.0	0.0	3.0	0.0	normal (3.0) scared (3.0)
12	37	56.7	0.0	5.4	0.0	2.7	29.8	2.7	2.7	0.0	0.0	--
17	26	61.6	7.7	0.0	7.7	7.7	0.0	7.7	0.0	0.0	0.0	surprised (3.8) not pay att. (3.8)
21	33	36.5	15.2	3.0	6.0	6.0	24.3	6.0	0.0	0.0	0.0	"felt like helping that person" (3.0)
25	31	41.9	12.9	3.2	9.8	6.4	9.8	3.2	3.2	0.0	3.0	bad (3.2) sleepy (3.2)
29	71	57.7	5.6	2.8	11.2	2.8	14.0	0.0	1.4	1.4	1.4	hurt (2.8)
T	230	52.3	7.5	2.4	6.9	5.8	15.2	3.2	1.3	.73	.73	4.3

the Heart to Heart talks. The results of the analysis of the responses given to this item are presented in Table 11. On the average, 66.3% of the students had wanted to talk more during the talks, with 24% having wanted to talk a lot more and 42.3% having wanted to talk "a little more."

The responses given by the students to an open-ended question asking them to write in anything they wanted to say about the particular day's Heart to Heart talk were rather homogeneous. For the most part, students expressed a liking for the talks, commenting that they were fun and allowed them to express and listen to feelings.

A sample of student comments is offered below.

- It was very nice to hear other people's feelings.
- It was fun, and interesting.
- I like it and it is fun.
- I really got a load off my chest.
- Well, I like *Heartsmart* because I think people should know my feelings.
- I like the Heart to Heart talks because they say a lot of good questions.
- I like sharing my feelings with other people.
- It gave me the impression of what different disagreements people have.
- I thought this lesson helped me with friendship.
- I really like it because it is interesting.
- I really like to say my feelings to everyone in the classroom.

Group Work. The results of the analysis of responses given by students at the end of the program to items measuring feelings with respect to the group experiences offered by the course are presented in

Table 11

Percent of Students Wanting to Talk More During Individual Heart to Heart Talks.

		Students' Desire to Talk		
Heart to Heart Talk	N	Yes, A little more	Yes, A lot more	Total wanting to speak more
6	30	30.0	40.0	70.0
12	33	45.0	27.0	72.0
17	27	44.0	25.0	69.0
21	33	45.0	21.0	66.0
25	30	43.0	13.0	56.0
29	72	47.0	18.0	65.0
Mean	225	42.3	24.0	66.3

Table 12. Each of the quadrants of the table presents slightly different information. Part I presents the percents of students who were leaders at some time during the program; Part II shows student preferences for being either a leader or a regular group looper (member); and Parts III and IV present student feelings with respect to individual and group work, respectively.

Sixty-eight percent of all students responding to this group questionnaire were leaders at one time or another during the course.* Variation among sites was apparent. At Site E, for instance, 92% of the students in the class were leaders, whereas at Site D, only 45% of the students in the class were leaders, and at Site F, only 51% were leaders. Looking at the percents in Part II, of the students who were leaders, a majority (56.8%) responded that having been leader was better than having been a regular looper. The leaders of all sites showed this preference for leadership, with the students from Sites A and E reporting the greatest preference.

Looking at the total figures for Parts III and IV, no clear preference for individual or group work was evident. Students seemed to like working in groups and by themselves equally well. Some variation among sites was apparent, however, especially with respect to the appeal of the group work. The students at Site D seemed to enjoy group work a

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*The teacher's manual informed teachers that there were opportunities for four people to be leaders for each group. The first leader was to be selected by the teacher, and the others elected within groups by students. Students were allowed to reelect leaders. There were 5 or 6 groups in each class.

Table 12

Student Reactions to Group Work in Percent by School

	I		II				III				IV			
Sites	N	Leaders	Being Leader is Better	Being Looper is Better	Neither	No Answer	Like Working by Myself "not at all"	Like Working by Myself "some"	Like Working by Myself "A lot"	No Answer	Like Working in Group "not at all"	Like Working in Group "some"	Like Working in Group "A lot"	No Answer
A	22	86.0	77.0	9.0	0.0	14.0	23.0	45.0	27.0	5.0	9.0	36.0	55.0	0.0
B	27	70.0	44.0	22.0	4.0	30.0	18.0	60.0	22.0	0.0	11.0	56.0	33.0	0.0
C	24	66.0	54.0	33.0	0.0	13.0	20.0	42.0	33.0	4.0	17.0	33.0	46.0	4.0
D	24	45.0	42.0	20.0	0.0	38.0	13.0	62.0	25.0	0.0	4.0	20.0	80.0	0.0
E	27	92.0	78.0	18.0	4.0	0.0	7.0	37.0	52.0	4.0	26.0	44.0	26.0	4.0
F	33	51.0	46.0	30.0	0.0	24.0	9.0	40.0	51.0	0.0	21.0	43.0	36.0	0.0
+ G	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T	157	68.0	56.8	22.0	1.3	19.8	15.0	47.7	35.0	2.3	14.7	39.0	46.0	1.3

I = Percent of Ss having been leaders.
II = Preference for being a leader or a looper.
III = Appeal of Individual Work.
IV = Appeal of Group Work.

+No group survey forms were returned from this site.

great deal, 80% reporting to have liked working in a group "a lot." In contrast, the students from Site E showed the least preference for group work, only 26% reporting to have liked working in groups "a lot." Relatively small percents (approximately 15% for both group and individual) of students reported having not liked working in groups or by themselves "at all." It is unclear, however, whether these two groups were different sets of students or the same sets of students expressing a dissatisfaction with the entire course.

Samples of the responses given by students to two open-ended items asking them to write in what they liked best and least about their groups are presented in the following pages. Responses for the "liked best" item fell into three categories. Students expressed a liking for the groups for the reasons presented below.

1. Their friends or people they liked were in them.
2. They liked having the chance to be leader.
3. They liked being together, cooperating, and sharing.

Representative Sample of Student Responses to: "What was the thing you liked best about your looper group?"

1. Having friends in the group.

   - I like the people best.
   - We had people that were funny.
   - I had friends in it.
   - I met nice people.
   - I was with my friends.
   - I had my friend in my group.
   - I got to work with my friends.

   - The group was my best friends.
   - They were funny and nice.

2. Being a leader in the group.
   - Being leader in the group.
   - Being a leader.
   - To be the leader.
   - I like when I was the leader.
   - Being leader so I could say, "be cooperative."

3. Being together, cooperating and sharing.
   - You could ask things without yelling out.
   - We could share things.
   - Being together.
   - The cooperation and people.
   - When people felt good.
   - Everyone cooperated.
   - I liked speaking out about my feelings to my group.
   - We were all good natured and didn't fight.
   - I liked the troubles we helped.
   - We told our feelings.
   - The things we did together.
   - Everyone was nice.
   - You got to know people better.

Responses for the "liked least" item also fell into three categories. Students commented that the things they did not like about their groups were:

1. having one or more persons in the group they did not like,
2. too much general noisemaking and disruption within the group,
3. being exposed to some mildly negative situations.

Representative Sample of Student Responses to: "What was the thing you liked least about your looper group?"

1. Having disliked people in the group.
   - Some of the people.
   - I didn't like someone in my group.
   - Being without some of my friends.
   - I disliked such and such a person.
   - I didn't like a person.
   - The people who were in it.
2. Too much noise and general disruption.
   - Some people didn't like it and didn't do anything.
   - When you [teacher on the tape] were talking my friends were talking too.
   - Some people didn't follow directions and messed around and talked.
   - [Named person] fooling around.
   - I did not like when everyone started to be bad.
   - Sometimes everyone fooled around.
   - Everybody yelling and shouting.
   - That everyone was not cooperating.
   - I did not like when we were loud.
   - They didn't cooperate.
   - People would fuss over any little thing.
3. Being exposed to negative situations.
   - When you say your feelings out loud.
   - The fags called me names, didn't let me be leader, and said they hate me.
   - When the boys teased me.
   - I was yelled at.
   - When other people were the leader, they were bossing me around.
   - When everyone would talk about my friend.

Teacher Reactions

Teachers reported their reactions on a series of survey forms.

Teachers' perceptions of program appeal to students. Responses given by teachers to an item asking them to rate the four components of the program — story installments, tape-led games, Heart to Heart talks, and optional activities — with respect to student enjoyment are presented in Table 13. Teachers could select from 5 alternatives: "a great deal;" "quite a lot;" "some;" "a little;" and "very little." None of the teachers rated any component in the two lowest categories.

Data were available for only four sites, C, D, E and F.* On the whole, teachers felt that their students enjoyed the course components either "some" or "quite a lot." The teacher from Site D reported that, in her opinion, her students enjoyed the Heart to Heart talks, and the optional activities "a great deal." It is interesting to note that, comparatively, the teachers from the two inner city sites for which data were available (E and F) gave the least favorable ratings to the components. All but one of their ratings fell into the "some" category.

Tape-led Lessons. Teachers were asked to rate the taped lessons according to the following six dimensions: (1) volume; (2) space; (3) appeal of characters; (4) appeal of storyline; (5) conceptual clarity; and (6) overall quality. Responses could be selected from five alternatives: very poor, so-so, good, and very good.

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*Only 4 teachers completed the questionnaire in which the relevant item was found.

Table 13

Teachers' Ratings of Program Components
With Respect to the Enjoyment of Their Students.

Program Components	Degree of Enjoyment		
	Some	Quite A Lot	A Great Deal
Story Installments	E, F	C, D	--
Tape-led Games	F	C, D, E	--
Heart to Heart Talks	E, F	C	D
Optional Activities	E	C, F	D

Schools for which data were available: C, D, E, F.

Figure 7 presents the teacher reactions to the taped lessons with respect to the first two dimensions, volume and pace. On an average, 83.3% of the teachers, with a range of 57% to 100%, rated the volume of the taped lessons as being either good or very good. The mean percent of teachers rating the lessons as either good or very good with respect to pace was 88.6%, with a range of 71% to 100%.

Figure 8 presents the results of the analysis of ratings given by teachers to the taped lessons with respect to appeal of characters and appeal of storyline. The mean percent of teachers rating the lessons as either good or very good with respect to appeal of characters was 87.7, with a range of 66% to 100%. The mean percent of teachers rating the lessons as either good or very good with respect to appeal of storyline was 89.7, with a range of 50% to 100%.

Figure 9 presents teacher reactions to the taped lessons with respect to conceptual clarity and overall quality. On an average, 85.1% of teachers, with a range of 57% to 100%, rated the lessons as being either good or very good with respect to conceptual clarity. The mean percent of teachers rating the lessons with respect to overall quality as being either good or very good was 91.8, with a range of 50% to 100%.

Heart to Heart talks. Teachers were asked to report whether they were enthusiastic or unenthusiastic about the concepts presented in each Heart to Heart talk. The results of the analysis of the responses given by teachers are presented in Figure 10. The mean percent of teachers having felt enthusiastic about the concepts presented in the

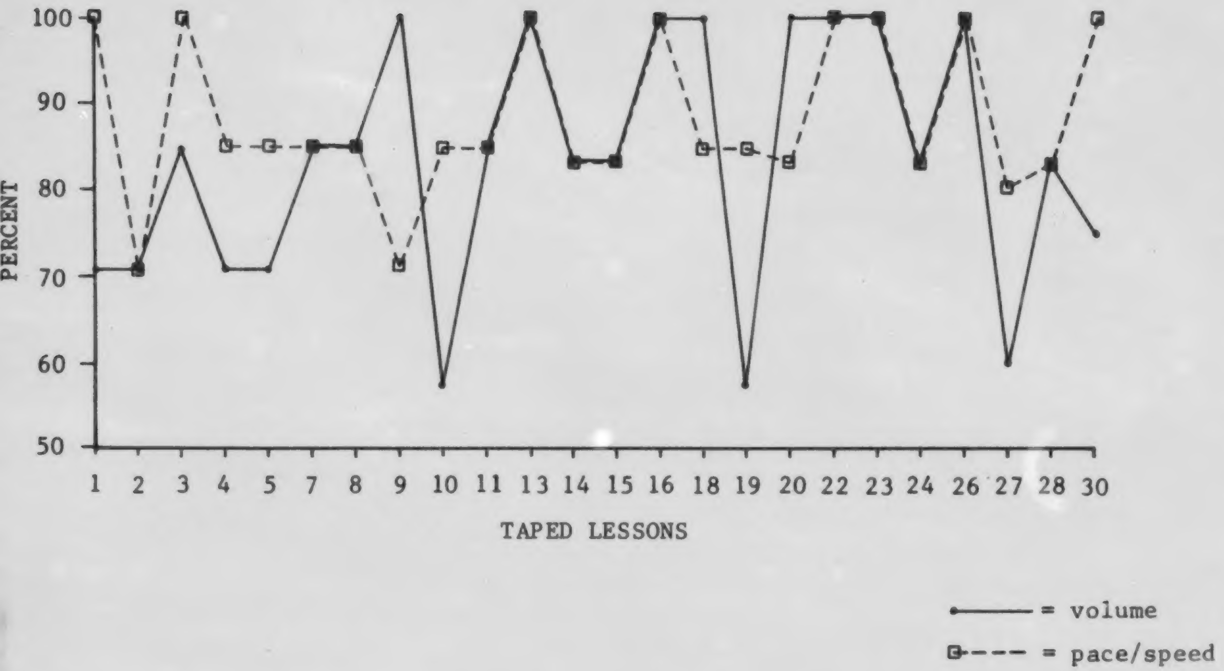

Figure 7: Percent of teachers rating taped lessons with respect to volume and pace/speed as either "very good", or "good" shown as a function of lessons.

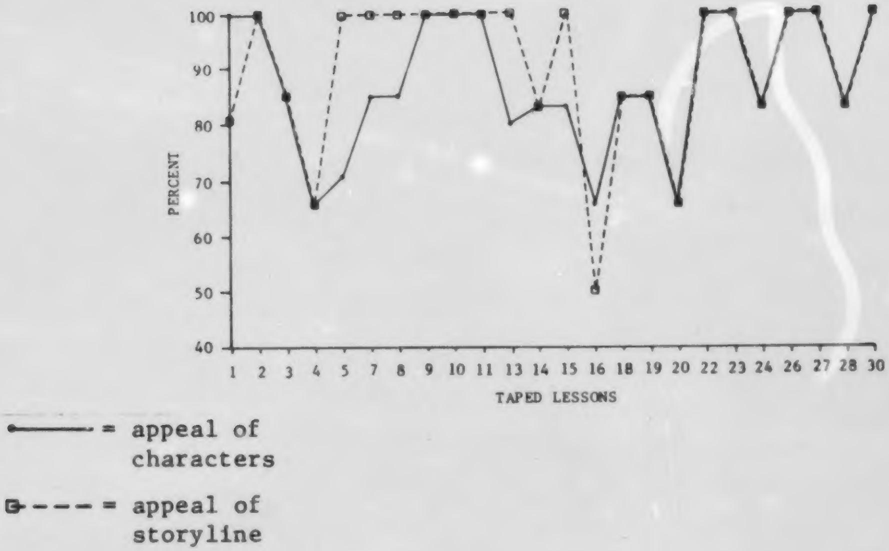

Figure 8: Percent of teachers rating the taped lessons with respect to appeal of characters and appeal of storyline as either "very good" or "good" shown as a function of the lessons.

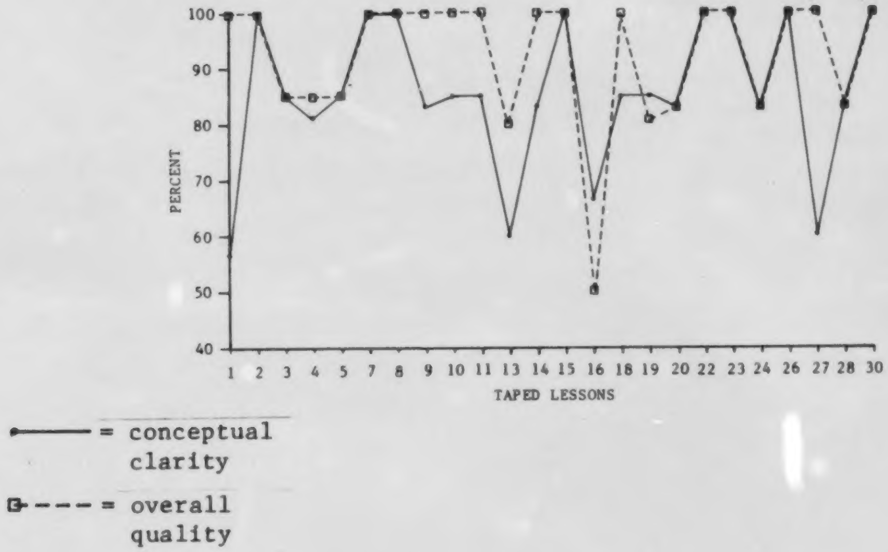

Figure 9: Percent of teachers rating the taped lessons with respect to conceptual clarity and overall quality as either "very good" or "good" as shown as a function of the lessons.

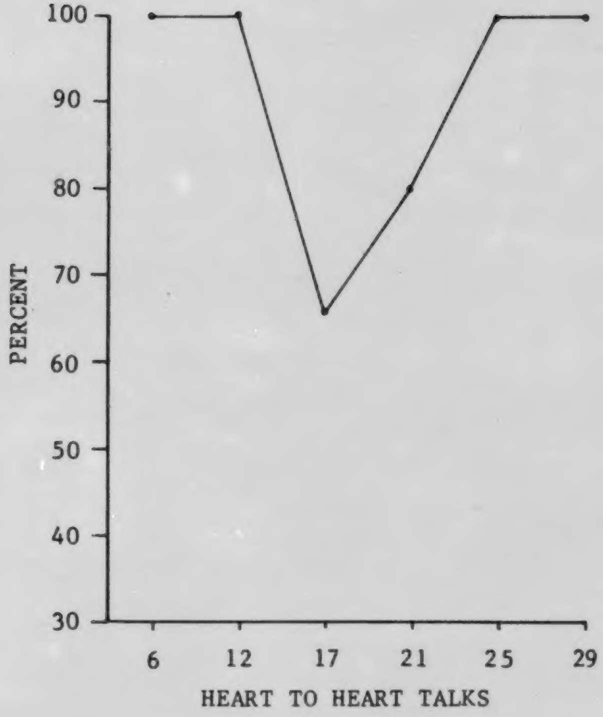

Figure 10: Percent of teachers reporting to have been "enthusiastic" about the concepts of the Heart to Heart Talks shown as a function of the individual talks.

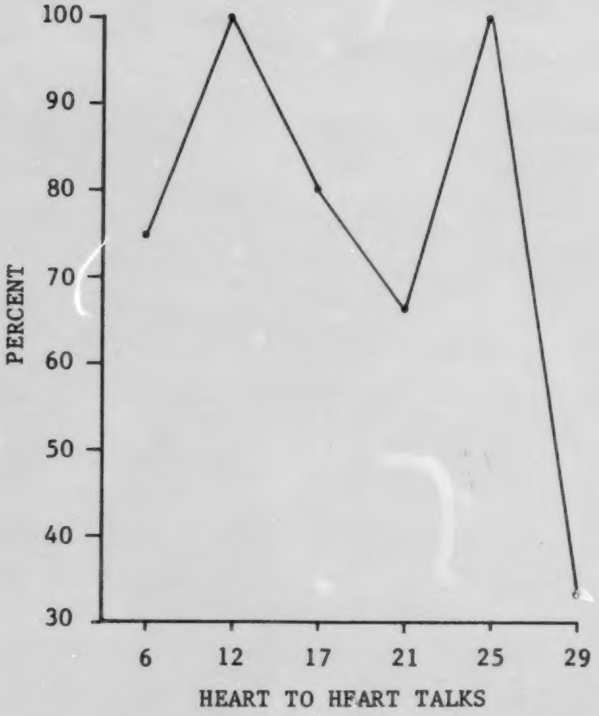

Figure 11: Percent of teachers having found the talks to be "very worthwhile" shown as a function of the individual talks.

Heart to Heart talks was 91, with a range of 66% to 100%. Teachers were also asked to rate the Talks according to how "worthwhile" they were for their students. Teachers could select responses from three alternatives: not worthwhile, fairly worthwhile, and very worthwhile. The results of the analysis of the responses given by teachers to this item are presented in Figure 11. The mean percent of teachers having felt that the Heart to Heart talks were "very worthwhile" was 75, with a range of 33% to 100%. Heart to Heart talks #12 and #25 received the highest ratings in terms of both enthusiasm and value. Teachers questioned the value of the last Heart to Heart talk.

Optional Activities. The frequency of optional activity use during the field test by each site is presented in Table 14. The figures reported represent the number of times teachers reported using activities following the taped lessons, and should not be misinterpreted as representing the number of actual activities used by individual teachers after lessons or at other times. Data on the actual number of activities used were available for only three sites (B, C, and G) and have also been reported in Table 14.*

For Unit I, teachers could have used optional activities after each of 10 taped lessons. None of the teachers reported using optional activities after every lesson (100% of the time), but the teacher from site B used activities after 9 lessons (90%), teachers from sites A, F,

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*The report form which required teachers to fill in the name of all activities used for a certain lesson was not submitted by the other sites.

Table 14

Frequency of Optional Activity Use For Each Site by Unit

SITES	UNIT			COURSE	TOTAL NUMBER OF ACTIVITIES USED
	I	II	III		
A	*8 80	3 42	3 58	14	+
B	9 90	7 100	7 100	23 95	63
C	4 40	3 42	2 28	9 37	15
D	7 70	3 42	5 71	15 62	+
E	5 50	0 0	0 0	5 20	+
F	8 80	3 42	0 0	11 45	+
G	8 80	6 85	4 57	18 75	32
Unit Frequencies	49 70	25 51	21 42	95 56	

+ = No data were available for these sites.

* The figures to the left of the diagonal represent the number of times teachers used optional activities. The figures to the right of the slash are percentages representing the number of times activities were used divided by the number of possible times

and G used activities after 8 lessons (80%), and the teacher from site D used activities after 7 lessons (70%). Teachers from sites C and E reported using activities the least number of times, 4 (40%) and 5 (50%) times, respectively. Looking at Unit I as a whole, the maximum number of total times activities could have been used after lessons was 70 (7 sites multiplied by 10 lessons). Teachers, for Unit I, reported using activities 49 out of the possible 70 times, or rather, 70% of total times.

For Unit II, teachers could have used activities after each of the 7 taped lessons. Only one teacher (B) reported using activities the maximum number of times; sites G, F, D, C, A, and E used activities 6 (85%), 3 (42%), 3 (42%), 3 (42%), 3 (42%), and 0 (0%) times, respectively. Out of a possible maximum of 49, for the unit as a whole, teachers reported using activities 21 times, or 42% of the possible total.

For Unit III, teachers, again, could have used activities after each of 7 taped lessons. The teacher from site B reported using activities the maximum number of times, with sites D, G, A, C, E, and F using activities 5 (71%), 4 (57%), 3 (42%), 2 (28%), 0 (0%), and 0 (0%) times, respectively. Looking at the unit as a whole, teachers used activities 21 out of the 49 maximum total number of times possible (or, after 42% of the lessons).

The data available on the number of activities used are reported in the right hand column of Table 14. The teacher from site B used a total of 63 activities and the teachers from sites C and G used a total of 32 and 15 activities, respectively. Of the 63 activities used by the teacher from site B, most were of a type involving discussion, and drawing and/or writing. The teacher from site C primarily used the ditto sheet activities provided in the manual. Most of the activities used by the teacher from site G were of a "paper and pencil" nature.

When asked to indicate their reasons for using an optional activity, teachers consistently noted all four of the offered response alternatives: (1) I liked it; (2) I thought students would like it; (3) it reinforced lesson objectives; and (4) it reinforced course objectives. Other reasons for using an activity that teachers noted were: (1) it motivated the students; (2) it expanded language skills; (3) it increased creativity; and (4) it clarified concepts. The almost unanimous reason given for having decided not to use an optional activity was lack of time. The teacher from site E also reported that her students were too uncooperative, especially near the end of the program, to be able to complete an activity.

Teachers reported having found the optional activities to be enjoyable to their students (see Table 14) and easy to administer (see Table 15). During their interviews, they commented that the activities were very helpful and, in fact, necessary for clarifying and reinforcing lesson and program concepts. The most frequent suggestion made was that the activities should involve the students more actively, to contrast with the sitting, listening and coloring required for the taped lessons.

Importance/Relevance of Program. Determining how important or relevant the program is with respect to the students' personal development and to education in general was considered an important aspect of an evaluation pertaining to appeal and acceptability. Because of the age of the students, information relating to importance and relevance was solicited from teachers.

Teachers were asked to rate each taped lesson with respect to how important they felt the contents were to their students' lives on a five point scale: not important; a little important; fairly important; very important; and extremely important. The results of the analysis of these responses are presented in Figure 12. On an average 72.9% of the teachers, with a range of 60% to 100%, found the contents of the taped lessons to be very important or extremely important to their students' lives.

Teachers were also asked to write in responses to questions concerning the importance of the program goals to elementary education and to their students' personal development. Only four of the seven teachers participating in the program (B, D, E, F) responded to the questionnaire in which these two questions were found. The responses given by these four teachers are presented below.

How important are the course goals to elementary education?

(B) "Very important and relevant to 4th grade peer problems."

(D) "In order for a child to reach full potential academically, he must be aware of himself and the world about him and be

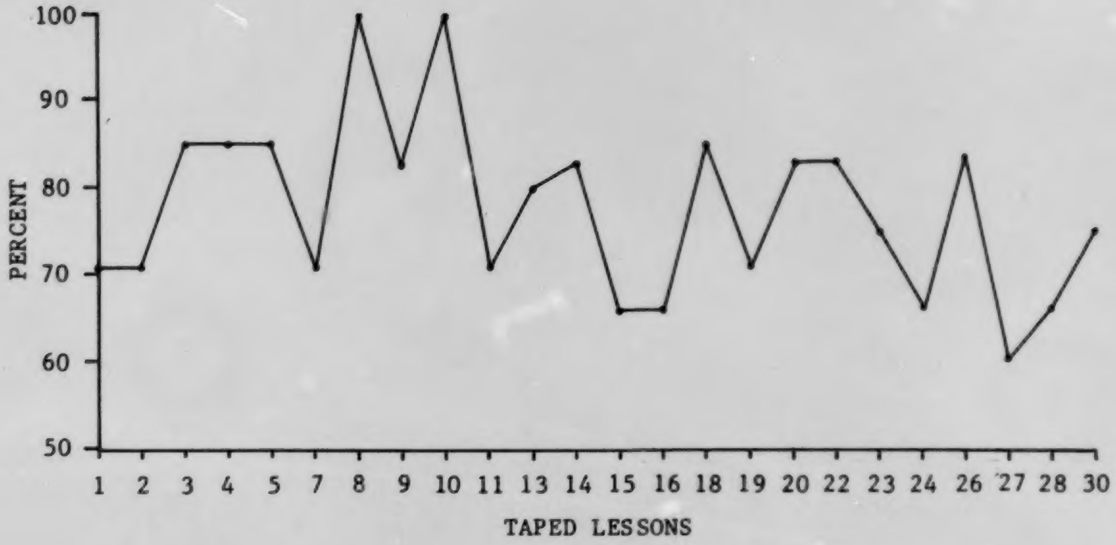

Figure 12: Percent of teachers finding the contents of the taped lessons to be "extremely important" or "very important" to their students' lives shown as a function of lessons.

able to understand and cope with feelings and problems that arise. He must develop a good self concept and feel accepted by peers as well as the adult world. *Heartsmart* takes this all into account and works it out beautifully for the children. The program guides them into a great deal of 'soul-searching and understanding of human behaviors'."

(E) "Extremely/children must learn to be less selfish."

(F) "Good."

How important are the course goals to students' personal development?

(B) "Very important. I think the children will remember a lot of what they learned."

(D) Answer included in above statement.

(E) "Very important — (children) must learn to share and recognize others' feelings."

(F) "Very, helps to direct your thinking."

Ease of Administration. Teacher reactions to the program with respect to ease of administration were considered important to determining the overall acceptability of the program, especially for educators.

Teachers were asked to rate the four components of the program — story installments, tape-led games, Heart to Heart talks, and optional activities — according to how easy or difficult they were to administer. Responses could be selected from four alternatives: very difficult, difficult, easy, and very easy. The ratings given by the teachers are presented in Table 15. Data were available for only four sites: B, D, E, and F. All four of the teachers responding found the story installments, the taped games, and the optional activities easy or very easy to administer. Three of the four teachers found the Heart to Heart talks easy or very easy to administer and one teacher found the talks difficult to administer.

Table 15

Teachers' Ratings of Program Components ~~With~~ Respect to Ease of Administration.

	Ease of Administration			
Program Components	Very Difficult	Difficult	Easy	Very Easy
Story Installments			E	B, D, F
Taped Games			B, E	D, F
Heart to Heart Talks		F	B, E	D
Optional Activities			B, E, F	D

Schools for which data were available:
B, D, E, F

Responses given by these same teachers to other items relating to administration also indicate that the program was considered easy to implement. All four teachers found the program materials easy or very easy to prepare, collect, and store, and all reported having encountered no procedural difficulties when administering the program. Two of the four teachers felt that the program required no more preparation time than other subjects; one commented that in order to have a good lesson, the materials needed to be thoroughly checked and that this required more preparation time than usual; and one offered no response.

V. STUDENT ACHIEVEMENT

Student achievement refers to the performance of students on the Game- and Reviewpages which followed and were completed after the presentation of the taped story. For evaluation purposes, a random sample of five sets of student materials was selected from each site for each lesson. (Emphasis has been placed on the Reviewpages, since these, more so than the Gamepages, were considered to be indicators of student comprehension of individual lesson concepts.)

Figure 13 presents the results of the analysis of answers given by students to the questions on the Reviewpages. On an average, only 4.4% of all the answers given for all the review questions were incorrect (with a range of .6% to 9.7%). Lesson 27 had the most number of incorrect responses given to its review questions. Lesson 28 had the least number of incorrect responses given.

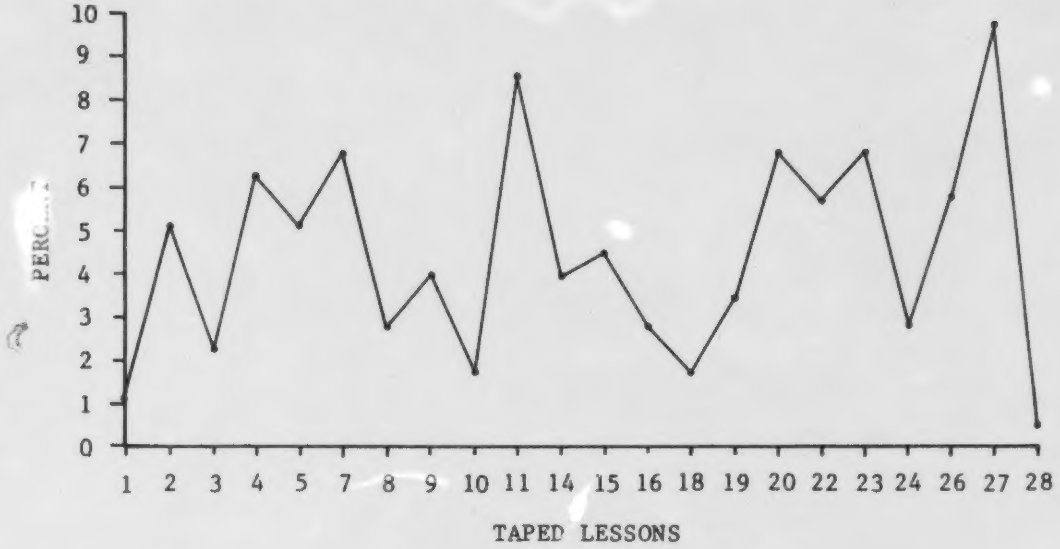

Figure 13: Percent incorrect answers given by students to review questions.*

*Taped lessons #13 and #30 had no review pages.

Students were conscientious in completing the Gamepages, and for the most part were able to follow the instructions given by the tape and complete assigned tasks satisfactorily. The few problems that were apparent were due primarily to confusing page layouts and insufficient clarification of the taped directions.

VI. PROGRAM EFFECTIVENESS

Preceding sections of this chapter dealt primarily with formative evaluation results with respect to program antecedents, program transactions, and, to some extent, program outcomes. However, the focus of this section is on program outcomes as related to the goals/objectives of the program. The first part of this section takes the approach of a congruency analysis in which the question of how successful the program was in achieving its stated goals/objectives is addressed. Four hypotheses are stated and results which provide evidence to support or reject these hypotheses are reported. Comparing differences between experimental and comparison groups on measures of program effectiveness, and reporting results from interviews conducted with experimental students and teachers establish the bases for the congruency analysis. The second part of this section considers two antecedent factors, pupil sex and classroom environment, and several program implementation factors in relation to program outcomes in the manner of a contingency analysis. The questions addressed in this part tend to be exploratory and suppositional in nature rather than based upon a specific *a priori* set of goal-based evaluation hypotheses. The overall objective of this section is to report results bearing on the relationships among treatment condition, contingency factors, and program outcomes.

Congruency Analysis

Hypothesis 1

The *Heartsmart* program students will demonstrate greater ability and/or tendency than comparison group students to:

- Identify feelings and behaviors, and infer feelings from behaviors in others;
- Identify ways in which people may behave when they have certain feelings;
- Identify the cause and effect relationship between feelings and behavior;
- Determine feelings in others by asking;
- Express individual needs and desires and take (appropriate) actions to accomplish them; and
- Express feelings.

The multidimensional hypothesis reflects the interest of the *Heartsmart* program to improve interpersonal skills primarily in attributes related to the domain of "feelings." Each dimension corresponds to a specific program objective. The hypothesis was tested by examining results from the two criterion-referenced tests used in the field test, What's Happening? and What Would You Do? in terms of differences between experimental and comparison classes.

Table 16 displays MANOVA statistical results of each field test site on the above two measures. The important parts of the table to inspect are the experimental and comparison group mean scores for each

Table 16
Multivariate and Univariate ANOVA Results of Experimental vs. Comparison Group Differences on the *What's Happening?* and *What Would You Do?* Tests, Reported by Each School

		Experimental		Comparison		
SCHOOL		N	MEAN	N	MEAN	UNIVARIATE F-TEST
A	What's Happening?	23	16.22	21	12.90	6.84**
	What Would You Do?	23	9.82	21	6.42	12.10**
	MANOVA $F_{(2,39)} = 7.35$**					
B	What's Happening?	28	13.43	28	13.21	0.05
	What Would You Do?	28	11.36	28	7.86	12.36**
	MANOVA $F_{(2,51)} = 6.12$**					
C	What's Happening?	28	14.42	23	12.04	6.01**
	What Would You Do?	28	6.67	23	7.34	2.01
	MANOVA $F_{(2,46)} = 4.61$*					
D	What's Happening?	24	15.33	24	14.63	0.68
	What Would You Do?	24	12.88	24	9.62	7.86**
	MANOVA $F_{(2,43)} = 4.07$*					
E	What's Happening?	28	12.71	24	10.87	4.15*
	What Would You Do?	28	9.42	24	6.16	10.04**
	MANOVA $F_{(2,47)} = 5.77$**					
F	What's Happening?	30	14.03	31	10.32	21.66**
	What Would You Do?	30	9.20	31	7.38	4.57*
	MANOVA $F_{(2,56)} = 11.46$**					
G	What's Happening?	23	12.43	23	11.04	1.53
	What Would You Do?	24	8.54	23	6.69	7.74**
	MANOVA $F_{(2,41)} = 3.99$*					

* significant at the $p < .05$ level
** significant at the $p < .01$ level

measure and the multivariate and univariate F-test results. The MANOVA F values, signifying the results of testing differences between two centroids between experimental and comparison groups on both measures, are statistically significant ($p < .05$) at all field test sites. Treatment differences are statistically significant at the $p < .01$ level in four schools and at the $p < .05$ level in the remaining three schools. The univariate F-test results show that experimental classes score significantly higher on the average than comparison classes on either or both tests in all seven schools. At school A the mean score differences on each test are highly significant ($p < .01$). The results at schools B, D, E, and G indicate very strong differences ($p < .01$) between groups on the What Would You Do? test; and at school F, group differences turned out to be significant at the $p < .05$ level. In schools C and F, univariate tests indicate highly significant differences ($p < .01$) on the What's Happening? test. All univariate test results differentiate experimental and comparison groups consistently in favor of experimental groups. The univariate results found in school E may be questioned on the grounds that the assumption of homogeneity of variances between groups was not met (Hartley's $F\text{-max}_{(2,\ 29)} = 2.40$, $p < .05$). The largest variance was found in the experimental class; it is also the class which contains approximately one-third fifth grade pupils.

It is instructive to examine Hypothesis 1 in terms of its separate dimensions. Table 17 presents the mean percents of experimental and comparison group subjects giving correct answers to seven clusters of

Table 17
Mean Percentage of Experimental and Comparison Group Subjects Giving Correct Responses to Selected Item Clusters on the *What's Happening?* and *What Would You Do?* Tests

Program Objective	Items-Item Cluster: Test: What's Happening?	Items-Item Cluster: Test: What Would You Do?	Group	Mean Percentage (%) of Subjects Giving Correct Responses to Item Cluster (Program Objective): School: A	B	C	D	E	F	G	Average Total	z -Test
1. Identify (infer) feelings and behaviors and infer feelings from behavior in others.	A1, B1, B4, C1, D2, H1	✕	E	71.7	57.0	51.6	66.4	70.2	54.5	56.8	61.2	2.24*
			C	53.6	53.6	56.0	65.1	44.2	51.7	47.9	53.1	
2. Identify ways in which people may behave when they have certain feelings	C2, D3, E2[+], G1[+]	✕	E	68.2	54.5	71.1	56.5	49.1	62.4	52.9	59.2	3.81*
			C	52.8	41.1	52.9	53.2	42.1	36.7	39.2	45.4	
3. Identify cause and effect relationship between feelings and behavior.	A2,B3,C3, D1,F1,F2, H2,H3	✕	E	73.3	58.4	64.7	61.0	58.5	61.9	53.0	61.5	1.33
			C	54.8	64.0	50.9	67.1	54.9	54.2	51.4	56.7	
4. Determine feelings in others by asking (not by guessing).	B2, C4, E1a, E1c	2, 7, 10	E	66.1	65.5	55.2	75.3	60.4	62.7	60.7	63.6	2.60**
			C	70.6	64.5	49.1	62.5	42.2	47.5	43.7	54.3	
5. Express needs and desires and take actions to accomplish them.	✕	3, 4, 6, 8, 14, 16, 17, 18	E	60.9	69.6	38.0	77.0	53.3	51.5	50.4	57.2	4.32**
			C	36.3	40.8	38.9	59.8	37.6	39.3	39.0	41.6	
6. Express feelings.	✕	1, 5, 9, 11, 12, 13, 15	E	39.1	48.2	29.6	54.8	38.6	40.5	39.1	41.4	1.92
			C	28.5	36.8	40.8	37.9	34.5	36.8	27.0	34.6	
TOTAL										Experimental Group	57.3	2.67**
										Comparison Group	47.6	

* $p < .05$
** $p < .01$

[+] analyzed as percentage of subjects giving at least one correct response.

items, each corresponding presumably to one of the dimensions (i.e., program objectives). Item clusters were formed on a logical basis by content analysis. Z-tests were performed to test for differences between proportions of correct responses given by experimental and comparison pupils for each item cluster. The results indicate that a significantly higher percent ($p < .025$, one-tailed test) of experimental subjects across all seven schools gave correct responses to four of seven item clusters than did comparison group subjects. Experimental students performed better on Objectives 3 and 6, but differences were not statistically significant. When all program objectives were considered in a single overall analysis, a significantly higher percent of experimental students gave correct responses to the tests' item clusters than the comparison students ($p < .01$).

The results from the above two sets of statistical analyses appear to provide substantial support for Hypothesis 1. For the most part, the results are both highly significant in a statistical sense and consistent across field test sites. To the degree that the two measures used in the analyses can be taken as valid measures of program objectives, Hypothesis 1 can be judged as having been strongly supported by the evidence. However, since the test of Hypothesis 1 was performed on posttest measurements only, the possibility of pre-existing group differences in favor of experimental classes cannot be completely ruled out as an alternative explanation for the obtained results.

Hypothesis 1A

Heartsmart program students will report they have learned interpersonal skills consonant with the objectives of the program.

Hypothesis 1 was stated as a comparative prediction that experimental classes would score higher than comparison group classes on program effectiveness assessment measures. Hypothesis 1A is a corollary to the first hypothesis in that it relates to the identical substance (i.e., interpersonal skills in the "feelings" domain), but it does not make a comparative prediction. Data gathered at the end of the course by interviews with approximately a 20% sub-sample (N = 38) of experimental subjects, presumably representative of all *Heartsmart*-instructed students in the field test, provided valuable information about students' perceptions of what they learned from the program. The above hypothesis was tested by analyzing the responses to Question 1 of the student interview according to the same "objectives" categories used in the statement of Hypothesis 1. The question was: "Think about Jack and his adventures, and the things he learned. What did you learn from *Heartsmart*?" The question is a very open-ended one; a legitimate evaluation concern might be raised about the validity of student interview results in that children may have learned interpersonal skills taught by the program but could not articulate them in a free-response manner. One might assert that the open-ended question method used in this instance probably provides a rather stern test of the hypothesis.

Table 18 shows the results obtained from analyzing student re-

Table 18
Analysis of Student Responses to the Question:
"What did you learn from Heartsmart?"

Program Objective	Number of Responses	Percent of Total Number of Responses	Percent of Students Giving Response
1. Identify feelings and behaviors, and infer feelings from behaviors in others.	9	19.5	28.1
2. Identify ways in which people may behave when they have certain feelings.	1	2.2	3.1
3. Identify the cause and effect relationship between feelings and behavior.	2	4.3	6.3
4. Determine feelings in others by asking.	5	10.9	15.6
5. Express individual needs and desires and take (appropriate) actions to accomplish them.	0	0.0	.0
6. Express feelings.	16	34.8	50.0
7. Other (i.e., non-classifiable responses in above 6 categories)	13	28.3	
TOTAL	46	100.0	100.0

NOTE: Above results are based on usable data from 32 experimental subjects.

responses to Question 1 of the interview ("What did you learn from *Heartsmart*?"). Of 38 subjects interviewed, 32 gave interpretable responses. A total of 46 responses (i.e., different ideas/thoughts) were classifiable into 6 "objectives" categories, and one "other" category. The "other" category contained responses that were relevant to program objectives outside of the "feelings" domain being examined here. The second column of numbers indicates the percent of all responses that were classified in each of the seven categories. The final (right hand) column shows the percent of students giving responses classified into the 6 "objectives" categories. Attention is focused primarily on this set of results. Fifty percent of the students responded with objective 6: expressing feelings; students reported learning that it was "good" or "O.K." to tell and/or show their feelings, to share feelings with others, and to express negative feelings (e.g., anger). Objective 1, identify feelings and behavior and infer feelings from behaviors in others, was expressed by more than one-fourth of the students (i.e., 28.1%). Objective 4, determine feelings in others by asking, was expressed by 15.6% of the students. Very few students responded in ways relating to objectives 2 and 3, and none of the students expressed objective 5.

These findings would appear to support Hypothesis 1A to the extent that most students interviewed (32 out of 38) reported in a free-response manner learning interpersonal skills from *Heartsmart Adventures* that were consonant with 5 of the 6 program objectives in the "feelings" domain. The evidence to support this hypothesis must be qualified in this respect: a very small number of subjects reported having learned interpersonal skills related to three program objectives, 2, 3 and 5.

Hypothesis 2

Heartsmart program students will transfer interpersonal skills learned from the program to other situations.

An objective stated for the program was to increase the likelihood that pupils would apply interpersonal skills they learned from the program to situations outside the classroom. This hypothesis was examined by an analysis of pupils' responses to Questions 2, 3 and 5 of the student interview. The results are reported below.

Of 38 interviewees, 33 reported that they show their feelings more now than they did before taking the program. Five subjects said that they do not show their feelings more now than before. Three of these five students reported they show their feelings less now than they did before. When asked what kind of feelings they show now, 17 subjects responded with some combination of the feelings taught in the course (e.g., mad, sad, glad, hurt, happy). Ten responded with a catch-all phrase "all feelings," and six subjects described situations in which they expressed or acted out feelings rather than naming the feelings. When asked where, or in what situations, they show their feelings now, nine subjects reported ones occurring mostly at home (with parents and siblings), 7 responded with "everywhere," six students reported showing feelings more only with their friends, one subject answered "just at school," and ten reported showing feelings at home and at school.

The interview asked students to relate a situation in which they expressed their feelings. Thirty-one subjects responded to this question by portraying a variety of situations in which they expressed a variety of feelings. Sixteen students reported situations involved with siblings and friends, and 14 of these 16 were situations in which siblings/friends were told to stop an annoying behavior. Seven students related situations in which feelings were expressed to parents, such as mad, sad, and scared feelings. Four students related situations in which they expressed feelings to adults outside the classroom. Four students told of situations in which they wanted to express their feelings, but didn't.

Earlier it was reported that three students said they showed their feelings less often now than before the program. One of these could not give a reason why, and the other two seemed to show an understanding of when it was best (for them) to hide feelings (e.g., when telling feelings might cause others to have hurt feelings, and when expressing feelings might bring on further trouble for themselves).

Question 5 asked pupils if showing feelings helped them in their interpersonal relationships. Thirty subjects answered "yes," 2 answered "no," and 5 said "sometimes." The 35 "positive" respondents were asked to explain how showing feelings helped them; 17 subjects stated that expressing their feelings "made them feel better," and 15 students said that some desired end was accomplished (e.g., getting a friend to stop an annoying behavior, getting friends to be nicer to them). The remaining three subjects did not give interpretable responses.

Also worth noting with respect to Hypothesis 2 are several responses to Questions 14 and 17 of the Teacher Interview indicating that students had become more confiding, and that they applied interpersonal skills outside the classroom.

In summary, data gathered from experimental subjects by interview at the end of the program provide support for Hypothesis 2. Since the interviews primarily dealt with only one program objective, "expressing feelings," it is difficult to assess how much transfer of learning from the program occurred in other objectives. Data supporting Hypothesis 2 are directed to a relatively narrow range of program objectives; it cannot be definitively stated, therefore, that interpersonal skills related to other program objectives have been applied in out-of-class interpersonal situations.

Hypothesis 3

The social climate of *Heartsmart* program classrooms will become increasingly more cooperative and satisfying than that of comparison group classrooms.

This hypothesis was tested by comparing experimental vs. comparison group classes on three scales of the My Class Inventory (MCI), using a repeated measures design MANOVA technique. Student and teacher interviews also provided relevant data for examining this hypothesis. The results from the MCI are reported first.

My Class Inventory

The goal stated for the program was that students will be able to cooperate more effectively with others by the end of the program. It is necessary to point out that the MCI scales are not measures of cooperative behavior, but rather measures of the level of cooperation which students perceive (or report) in their classroom. As used here, the concept of cooperation is defined in perceptual rather than behavioral terms and is a characteristic of the environment and not individuals. The test of Hypothesis 3 is based on the reasoning that if students in *Heartsmart* classes exhibited more cooperative behavior as a result of the program, then one would expect students to characterize the social climate of the classroom in terms of greater cohesion, friendliness, decreased hostility, and the like. The meaning of cooperation is best captured by the Friction(F) and Cohesion (C) scales of the MCI. These scales are negatively correlated with each other. The Satisfaction (S) Scale is negatively correlated with the Friction (F) Scale and positively correlated with the Cohesion (C) Scale. These relationships suggest that the S Scale may also be considered as an index of cooperation. Hypothesis 3 thus translates into the prediction that the mean scores from pre- to posttest should increase on the S and C Scales and decrease on the F Scale for experimental classes, and that the pre- post mean differences should be significantly larger for experimental than for comparison classes.

Among experimental classes, only the one at school D showed this pre- to posttest pattern of change, i.e., an increase in Satisfaction and Cohesion, and a decrease in Friction.

Table 19 presents MANOVA and univariate F-test results comparing experimental vs. comparison group classes in each school on mean pre- to posttest change scores for three MCI Scales: S, F, and C.

The results revealed that multivariate F's were significant at two of the seven schools: school B at the $p < .05$ level, and school E at the $p < .01$ level. At school B the Friction Scale discriminated most between experimental and comparison classes; in school E, Satisfaction and Cohesion Scales exhibited the most discriminating power. Contrary to expectation, at school B the mean score on the F Scale increased in the experimental class, decreased in the comparison class, and the difference between the mean changes between experimental and comparison classes (interaction effect) was highly significant ($p < .01$). Only one school, C, with non-significant multivariate F, showed significant univariate F-ratios. At school C, the Cohesion Scale was involved with the mean score decreasing in the experimental class for pre- to posttest and increasing in the comparison class.

Student and Teacher Interviews

Question 4, on the student interview form, and its sub-questions were analyzed to assess student perceptions of the classroom environment. When asked if the children in their class had changed since taking *Heartsmart*, 20 subjects out of 38 answered "yes," 10 responded with a

Table 19
Multivariate and Univariate ANOVA Results on the Satisfaction, Friction, and Cohesion Scales of the *My Class Inventory*

SCHOOL	SCALE	Experimental				Comparison				UNIVARIATE F-TEST
		N	PRE	POST	CHANGE	N	PRE	POST	CHANGE	
A	Satisfaction	23	7.23	4.92	-2.30	21	5.39	4.00	-1.39	2.57
	Friction	23	5.84	6.63	+0.79	21	6.51	7.91	+1.40	0.94
	Cohesion	23	6.03	5.39	-0.64	21	5.82	5.13	-0.69	.00
	MANOVA $F_{(3,38)} = 1.99$									
B	Satisfaction	28	5.96	4.82	-1.14	28	5.99	4.74	-1.24	0.02
	Friction	28	5.89	6.53	+0.64	28	5.85	4.99	-0.85	8.16**
	Cohesion	28	6.28	6.10	-0.18	28	5.25	5.53	+0.28	1.02
	MANOVA $F_{(3,50)} = 3.00$*									
C	Satisfaction	28	5.64	3.71	-1.85	23	3.65	2.04	-1.61	0.12
	Friction	28	6.50	7.07	+0.57	23	7.39	7.34	-0.05	1.31
	Cohesion	28	5.64	5.07	-0.57	23	5.30	5.78	0.48	5.57*
	MANOVA $F_{(3,45)} = 1.85$									
D	Satisfaction	24	5.69	6.52	+0.83	24	6.16	6.25	+0.09	1.28
	Friction	24	6.78	5.30	-1.47	24	5.25	5.16	-0.09	3.50
	Cohesion	24	5.82	6.57	+0.75	24	6.10	5.91	-0.19	3.03
	MANOVA $F_{(3,42)} = 1.80$									
E	Satisfaction	28	4.06	3.60	-0.46	25	5.56	3.12	-2.44	10.14**
	Friction	28	7.24	8.03	+0.79	25	5.94	7.30	+1.36	1.78
	Cohesion	28	5.24	4.99	-0.24	25	6.98	5.52	-1.45	5.02*
	MANOVA $F_{(3,47)} = 4.85$**									
F	Satisfaction	31	4.19	3.48	-0.71	31	3.87	3.05	-0.82	0.02
	Friction	31	7.58	8.19	+0.61	31	5.73	6.31	+0.58	0.00
	Cohesion	31	5.22	4.83	-0.39	31	5.74	5.83	+0.09	1.13
	MANOVA $F_{(3,56)} = 0.48$									
G	Satisfaction	24	4.70	3.95	-0.75	23	5.99	5.43	-0.56	0.09
	Friction	24	6.62	7.41	+0.79	23	6.93	7.05	+0.12	1.29
	Cohesion	24	5.79	6.08	+0.29	23	6.87	6.55	-0.32	1.16
	MANOVA $F_{(3,41)} = 0.82$									

* significant at the $p < .05$ level.
** significant at the $p < .01$ level.

qualified "yes," (e.g., "yes, some"), and 8 said "no." Students were asked to give an example of how the class had changed. Thirteen subjects stated that children in the class were "easier to get along with." Ten students responded that children were "friendlier and nicer" and that they talked their difficulties out more; 2 said that class members were more understanding of each other; 2 said class members had more feelings now. Three subjects (from the same school) reported that the class was different because the children fought more.

When asked if they "liked" the class better now than before *Heartsmart*, 22 subjects reported the class was better now, 3 said it was better before, 2 said neither, 3 said it was the same, and 8 gave no answer. In giving examples of how the class was better now, students unanimously reported with such answers as: the children were easier to get along with; were kinder, nicer, more friendly and helpful, and more caring of others; and were more willing to do more sharing with each other.

Interviews conducted with teachers were not specifically directed to questions about changes in the classroom environment. Nevertheless, to open-ended questions concerning changes in student behavior (Question 14) and benefits accrued from the program (Question 17), at least three teachers reported that they thought students had become more cooperative and accepting of each other.

In summary, the results obtained from the MCI and student and teacher interviews give partial support to the hypothesis that the social climate of *Heartsmart* program classrooms should become more cooperative and satisfying by the end of the program, and that compared with non-program instructed classrooms, such changes would occur to a greater degree. Multivariate results from the S, F and C Scales of the MCI indicate that at five of the seven schools in the field test no significant treatment group differences were found. At one of the two schools which did show significant group differences on the multivariate test, the hypothesis prediction was supported; at the remaining school, in the *Heartsmart* program class, scores declined on the S and C Scales and increased on the F Scale from pre- to posttest, but in the comparison group, this same trend was even more dramatic.

The student and teacher interview data, on the other hand, do not always support the findings obtained on the MCI. Both students and teachers reported higher levels of cooperative behavior and less friction among students. These somewhat inconsistent results are not easily reconcilable. Chapter Five of this evaluation report will delve further into an explanation of or speculation about these results.

FIRO-BC

No hypothesis is stated that relates to the FIRO-BC. In Section V of Chapter Three, the measure is briefly described in terms of content and purpose; Section VII of the same chapter discusses perceived limitations and difficulties related to the use of this instrument as a measure of program effectiveness. In view of these considerations it was decided that it might well be presumptuous to generate hypotheses; the alternative of presenting a discussion of results seemed more appropriate.

Before presenting the results, it is necessary to define the terms used in the FIRO theory, and to describe the scales and their relationships. Three affective areas are measured, each on two dimensions. The areas are described below.

- Inclusion: the degree of relationship with others with respect to interaction and association.
- Control: the degree of relationship with others with respect to control and power.
- Affection: the degree of relationship with others with respect to love and affection.

The two dimensions are:

- Expressed — the way in which the person perceives himself or herself as behaving toward others;
- Wanted — the way in which the person wants others to behave toward him or her.

An interpretation of scores on the Expressed (E) and Wanted (W) dimensions in relation to each of the areas of Inclusion, Control, and Affection, based on Schutz (1966), is summarized in Table 20.

The scores on each of the six FIRO-BC scales (each of the 3 areas X the 2 dimensions) range from 0-9. Thus, mid-point scores fall at 4 or 5; very low scores range from 0-2; and very high scores range from

Table 20

Interpretation of High and Low Scores on the FIRO-BC

AREA	SCALE	DIMENSION	
		Expressed	Wanted
Inclusion	High	I initiate interaction with others.	I want to be included, paid attention to by others.
	Low	I exclude others from my activities.	I want others to leave me alone.
Control	High	I make decisions, try to control others.	I want others to control me.
	Low	I am a follower, tend to submit to others.	I want others to submit to my authority.
Affection	High	I act close and personal toward others.	I want others to be close and personal toward me.
	Low	I act cold and distant toward others.	I want others to remain at an emotional distance from me.

7-9. Since the FIRO-BC is not an achievement test, no positive or negative connotation is attached to any score on one dimension; a high score on a single dimension is no better or worse than a low score.

As may be seen from an examination of Table 20, high scores on both dimensions in the areas of Inclusion and/or Affection are complementary, as are low scores on both dimensions for those two areas. When E and W scores are complementary, or close, (for Inclusion and Affection) an individual is likely to feel comfortable as a person and in relationship to others. Conversely, when an E score is higher or lower than a W score, in either of the two areas, an individual is likely to be dissatisfied as a person and frustrated in relationships with others. Thus, the relationship between dimensional scores for each of these two areas is highly relevant.

The area of Control is unlike the other two. "There is no necessary relation between an individual's behavior toward controlling others and his behavior toward being controlled," (Schutz, 1966, p. 23). The illustrative example given by Schutz (1966) cites an army sergeant who willingly wields authority over privates, and also willingly submits to the authority of officers. Thus, according to circumstances and situations, an individual could be equally comfortable with complementary or with opposing scores.

As stated in Chapter Three, although *Heartsmart* is structured on the FIRO theory, the program is not necessarily designed to change an individual's expressed or wanted behaviors in any of the three areas;

rather it helps the individual (somewhat covertly) to identify and define intrapersonal and interpersonal needs and to express the feelings on which those needs are based in order to accomplish that which the individual wants from others. Thus, if the program accomplished this objective, it is just possible, for instance, that an individual scoring low E Inclusion and high W Inclusion before the program would increase the E Inclusion score after the program. The same might also be true in the area of Affection. However, in the area of Control it is unlikely that pre- to posttest scores would change, since very few of the program exercises or lessons deal with this area.

Although the *Heartsmart* field test data were analyzed on an individual basis, they were reported as class means. Since this was the case, extreme high or low scores on either dimension for any area are "ironed out." Although scores in the area of Control are reported (in Table 23), they are not discussed since they appear to have little relevance to program effectiveness.

Inclusion. Table 21 presents pre- and posttest mean scores on each of the two dimensions for each class, experimental and comparison groups, at each site.

Pretest Expressed mean scores for experimental classes ranged from 2.77 to 5.11, and for comparison classes ranged from 3.57 to 4.78. At school G the two classes had identical mean scores of 3.74; no other pair of classes had a "match." The greatest difference was found at school B (5.11 for experimental vs. 3.68 comparison). The lowest

Table 21

Pre- and Posttest Results for Experimental and Comparison Groups on Expressed and Wanted Dimensions for Inclusion in the FIRO-BC

Site	Experimental							Comparison						
	N	Pretest			Posttest			N	Pretest			Posttest		
		E	W	E-W	E	W	E-W		E	W	E-W	E	W	E-W
A	23	4.04	3.52	.52	4.13	4.30	-.17	21	3.57	4.38	-.81	3.62	4.19	-.57
B	28	5.11	5.36	-.25	5.18	5.75	-.57	28	3.68	4.07	-.39	3.82	4.32	-.50
C	28	3.64	4.11	-.66	3,89	5.18	-1,29	23	4.78	4.74	.04	3.91	5.22	-1.30
D	24	3.25	3.67	-.42	3.63	4.25	-.63	24	3.88	5.00	-1.13	3.67	4.08	-.42
E	28	2.93	4.32	-1.39	3.82	3.93	-.11	24	4.21	4.33	-.13	4.21	4.25	-.04
F	30	2.77	3.00	-.23	2.83	4.00	-1.17	31	3.68	4.19	-.52	3.77	4.96	-1.19
G	23	3.74	3.74	0	3.91	4.70	-.78	23	3.74	4.30	-.56	3.39	2.87	.52

scores for all 14 classes were those for experimental classes at schools E (2.93) and F (2.77). Referring again to Table 20, it may be inferred that such low E Inclusion scores for schools E and F indicate that those experimental classes (but not necessarily all individuals) tended to exclude others from their activities. Scores for all other classes for pretest E Inclusion fell in the middle range.

Posttest Expressed Inclusion mean scores for experimental classes ranged from 2.83 to 5.18, and for comparison classes ranged from 3.39 to 4.21. Each of the experimental classes showed a slight gain from pre- to posttest, which the program developer believes to be a desirable result. Three of the comparison classes also showed a slight gain; one (school E) showed no change; and two comparison classes (schools C and D) showed a drop from pre- to posttest. The "match" noted on pretest scores for the two classes at school G was not maintained on posttest scores: the experimental class gained .17; the comparison class lost .35. The greatest gain from pre- to posttest on Expressed Inclusion was found for the experimental class at school E (.89); the smallest gain, for experimental classes, was found at school B (.07).

Pretest Wanted mean scores for experimental classes ranged from 3.00 to 5.36, and for comparison classes ranged from 4.07 to 5.00. The closest "match" was found at school E (experimental 4.32; comparison 4.33). The greatest difference between a pair of classes was found at school B (experimental 5.36; comparison 4.07). All W Inclusion pretest means fell in the middle range.

Posttest Wanted Inclusion mean scores for experimental classes ranged from 3.93 to 5.75, and for comparison classes ranged from 2.87 to 5.22. With the exception of school E, all experimental classes showed a gain from pre- to posttest on this dimension. Three comparison classes showed a gain from pre- to post; four showed a loss. The close pretest match found at school E was not maintained; the experimental W score dropped by .39, and the comparison W score increased by .08.

As stated earlier the relationship between that which is Expressed and that which is Wanted indicates the degree of intrapersonal and interpersonal satisfaction. On Table 21, the columns headed E-W present the difference between the two dimensions. (The Wanted mean score is subtracted from the Expressed mean score.) The smaller the difference, the greater is the satisfaction. Discrepancy scores are discussed later in relationship to Table 23.

Affection. Table 22 presents pre- and posttest mean scores on each of the two dimensions for each class, experimental and comparison groups, at each site.

Pretest Expressed mean scores for experimental classes ranged from 3.68 to 4.93, and for comparison classes ranged from 3.28 to 5.00. The closest "match" between pairs of classes was found at school B (experimental 4.93; comparison 4.75), and the greatest difference was found at school A (experimental 4.22; comparison 3.28). All scores fell in the middle of the range.

Posttest Expressed scores for experimental classes ranged from

Table 22

Pre- and Posttest Results for Experimental and Comparison Groups on Expressed and Wanted Dimensions for Inclusion in the FIRO-BC

Site	Experimental							Comparison						
	N	Pretest			Posttest			N	Pretest			Posttest		
		E	W	E-W	E	W	E-W		E	W	E-W	E	W	E-W
A	23	4.22	4.78	-.57	4.57	5.00	-.43	21	3.28	4.38	-1.10	3.43	4.57	-1.14
B	28	4.93	5.04	-.11	5.68	6.07	-.39	28	4.75	5.39	-.64	4.36	5.43	-1.07
C	28	3.68	5.14	-1.46	3.61	5.18	-1.57	23	4.57	4.65	-.08	4.65	5.48	-.83
D	24	4.58	4.96	-.38	4.75	5.08	-.33	24	5.00	5.71	-.71	4.50	4.63	-.13
E	28	3.75	4.43	-.68	3.75	3.68	.07	24	4.21	4.25	-.04	3.92	4.21	-.29
F	30	4.07	4.90	-.83	3.73	4.93	-1.20	31	3.81	3.90	-.09	4.16	4.42	-.26
G	23	4.04	3.74	.30	4.48	4.09	.39	23	3.39	2.87	.52	4.52	3.48	1.04

3.68 to 6.07, and for comparison classes ranged from 3.48 to 5.48. With the exception of school E, all experimental classes showed a gain from pre- to posttest, with the greatest average gain (1.03) found at school B. Five of the comparison classes showed a pre- to posttest gain; one (school E) showed no change; and one (school D) showed a loss.

The results presented in Tables 21 and 22, and the foregoing discussion lead to no definitive or generalizable conclusions. Although the developer might argue that "ideally" posttest scores for experimental classes should show a closer "match" than for pretest scores between the two dimensions (Expressed and Wanted) for the areas of Inclusion and Affection, generally speaking the results do not indicate that this is so.

Also, the developer might argue that, for experimental classes, from pre- to posttest, Expressed scores are more likely to increase than Wanted scores. In the area of Inclusion, Expressed scores increased for all experimental classes; Expressed scores for Affection increased for four experimental classes. Expressed Inclusion scores increased for three comparison classes; Expressed Affection scores increased for four comparison classes.

Theoretically, Wanted scores are unlikely to change in such a short time period as was covered by the field test. The fact that, for all experimental classes, except the one at school E, Wanted scores in Inclusion and Affection increased from pre- to posttest may be due to the fact that the program facilitated students' ability to identify and express their needs. Wanted scores from pre- to posttest increased in

Inclusion for three comparison classes, and increased in Affection for five comparison classes.

Discrepancies. A psychologically meaningful discrepancy is considered to occur when, for example, a score of 2-3 on one dimension is compared with a score of perhaps 6 or above on the other dimension in the same area of measurement (i.e., Inclusion, Affection). A very low (i.e., 0-2) or very high (i.e., 7-9) score is presumed to indicate that the attribute measured is "noticeably characteristic" of the person. The critical element in interpreting the E-W discrepancy is how discrepant the scores actually are. If the scores are approximately equal, "the probability is that the person behaves in ways which are compatible with his (her) needs" (Ryan, 1971, p. 5). Conversely, "the greater the discrepancy between the two scores, the greater the probability of conflict and/or frustration" within the person (Ryan, 1971, p. 5). This interpretation is valid for the Inclusion and Affection areas. Schutz (1966) states:

> How one expresses himself in the Inclusion and Affection areas is similar to how one would like to be acted toward; this is not so in the Control area. In that area there is a clear differentiation between how one would like to be acted toward and how one tries to act toward others (p. 80).

Taking the above considerations into account, a vital prerequisite must be met by the data: at the very least there must be statistically significant discrepancies between pretest Expressed minus Wanted (E-W) scores on the Inclusion and Affection scales, necessarily among experimental classes, and ideally among comparison classes also. An examination of the pretest E-W discrepancy scores, as shown in Table 23 revealed eight statistically significant E-W discrepancies out of 21 discrepancies in the experimental groups. The schools, and scale areas involved were: school B — Control; school C — Affection; school E — Inclusion, Control and Affection; school F — Control and Affection; and school G — Control. Half of the significant E-W discrepancies on pretest scores were in the Control area and will not be discussed, as explained earlier.

The magnitude of obtained E-W discrepancies in Affection and Inclusion was relatively small, not exceeding 1.46. If the minimal standard of psychological meaningfulness of an E-W discrepancy score is approximately 3.00, as suggested by Ryan (1971), then these pretest results probably do not establish a sound or sufficient basis for empirical conclusions. Nevertheless, in the interests of exploring the statistical results of the FIRO scales, attention may be turned to Table 23. This table presents multivariate and univariate ANOVA results on pre- to posttest E-W discrepancies on the FIRO-BC scales. In this table, for pre- and posttest discrepancies, the plus and/or minus signs have no positive or negative connotations. A plus discrepancy indicates that the Expressed score was greater than the Wanted score; a minus discrepancy indicates that the Expressed score was smaller than the Wanted score. Only four univariate test results are of specific interest: school C — Affection; school E — Inclusion and Affection;

Table 23

Multivariate and Univariate ANOVA Results on Pre- and Posttest Discrepancy Scores Between Dimensions for each of the Three FIRO-BC Areas for Experimental and Comparison Groups at Each School

SCHOOL	FIRO-BC SCALE	Experimental				Comparison				UNIVARIATE F-TEST
		Mean Discrepancy				Mean Discrepancy				
		N	PRE	POST	CHANGE	N	PRE	POST	CHANGE	
A	Expressed/Wanted Inclusion	23	0.52	-0.17	-0.69	21	-0.81	-0.57	+0.24	1.15
	Expressed/Wanted Control	23	-0.04	1.22	+1.26	21	1.[illegible]4	2.52	+1.48	0.06
	Expressed/Wanted Affection	23	-0.56	-0.43	+0.13	21	-1.09	-1.14	+0.05	0.05
MANOVA $F_{(3,38)} = 0.44$										
B	Expressed/Wanted Inclusion	28	-0.25	-0.57	-0.32	28	-0.39	-0.50	-0.11	0.14
	Expressed/Wanted Control	28	-1.64**	-0.78	+0.86	28	-0.36	-1.00	-0.64	3.79**
	Expressed/Wanted Affection	28	-0.11	-0.39	-0.28	28	-0.64	-1.07	-0.42	0.05
MANOVA $F_{(3,50)} = 1.46$										
C	Expressed/Wanted Inclusion	28	-0.46	-1.28	-0.82	23	0.04	-1.30	-1.34	0.45
	Expressed/Wanted Control	28	0.64	1.67	+1.03	23	-0.78	0.96	+1.74	0.53
	Expressed/Wanted Affection	28	-1.46**	-1.57	-0.11	23	-0.09	-0.83	-0.74	0.66
MANOVA $F_{(3,45)} = 0.37$										
D	Expressed/Wanted Inclusion	24	-0.42	-0.62	-0.20	24	-1.12	-0.42	-0.70	1.74
	Expressed/Wanted Control	24	0.95	-0.08	-1.03	24	-1.29	-1.33	-0.04	1.45
	Expressed/Wanted Affection	24	-0.37	-0.33	+0.04	24	-0.71	-0.12	+0.59	0.65
MANOVA $F_{(3,42)} = 1.01$										
E	Expressed/Wanted Inclusion	28	-1.39***	-0.11	+1.28	24	-0.12	-1.16	-1.04	10.57***
	Expressed/Wanted Control	28	0.93***	1.03	+0.10	24	1.54	1.83	+0.29	0.06
	Expressed/Wanted Affection	28	-0.68**	-0.07	+0.75	24	-0.04	-0.29	-0.25	1.86
MANOVA $F_{(3,46)} = 3.82$**										
F	Expressed/Wanted Inclusion	30	-0.23	-1.16	-0.93	31	-0.52	-1.19	-0.67	0.19
	Expressed/Wanted Control	30	1.37***	1.20	-0.17	31	1.13	1.42	+0.29	0.31
	Expressed/Wanted Affection	30	-0.83***	-1.20	-0.37	31	-0.10	-0.26	-0.16	0.12
MANOVA $F_{(3,55)} = 0.17$										
G	Expressed/Wanted Inclusion	23	0.00	-0.78	-0.78	23	-0.56	-0.22	+0.34	3.01*
	Expressed/Wanted Control	23	1.22***	1.61	+0.39	23	0.61	0.30	-0.31	0.75
	Expressed/Wanted Affection	23	0.30	0.39	+0.09	23	0.52	1.04	+0.52	0.54
MANOVA $F_{(3,40)} = 1.13$										

* $p < .05$ ** $p < .01$

and school F — Affection. In the table these test results are enclosed in boxes □ .

The reason for focusing attention on these sets of results is that in each case, pretest E and W scores were farthest apart (i.e., significantly different at the $p < .05$ level) compared with all other E-W pretest discrepancies (with the exception of the Control area which will not be discussed for reasons cited earlier); therefore, they represent the strongest bases for testing whether E and W scores come closer together on posttests. A desirable program change would be indicated by a reduction in E-W discrepancies.

Inclusion. Pretest discrepancy scores for experimental classes ranged from +.52 to -1.39, with one school (G) scoring the "ideal" of zero discrepancy.

Pretest discrepancy scores for comparison classes ranged from +.04 to -1.12, with school C scoring closest to the ideal with +.04.

Experimental and comparison classes at a given site did not have equal discrepancy scores. The closest pair of classes was at school F with the experimental class discrepancy equalling -.23, and the comparison equalling -.52.

Posttest discrepancy scores for experimental classes ranged from -.11 to -1.28.

Posttest discrepancy scores for comparison classes ranged from -.22 to -1.30.

A desirable program-related change from pre- to posttest is for experimental classes to reduce the magnitude of the discrepancy score. Such a change occurred for experimental classes at schools A and E, with the latter being the greater (-1.39 to -.11).

Comparison classes showing a pre- to post reduction of discrepancy scores include schools A, D and G, with the greatest being D (-1.12 to -.42).

The univariate test result at school E was significant; discrepancy scores from pre- to posttest indicate that the experimental class changed in the desired direction, while the comparison class changed in the opposite (undesirable) direction.

The multivariate F-Test on changes in E-W discrepancy at school E was statistically significant ($p < .05$). This result is primarily due to large differences between experimental and comparison groups on changes in the E-W Inclusion area. Inspection of mean scores reveals a reduction in E-W discrepancy from pre- to posttest for the experimental class, and an increase in E-W discrepancy in the comparison group. The differences between both groups in the direction of pre- to posttest change account for the significant MANOVA F-Test result.

Affection. Pretest discrepancy scores for experimental classes ranged from +.30 to -1.46, and for comparison classes ranged from +.52 to -1.09. Scores closest to the ideal were achieved by the experimental class at school B (-.11) and the comparison class at school E (-.04). The school having the closest "match" was school G (Experimental = +.30, Comparison = +.52).

Posttest discrepancy scores for experimental classes ranged from +.39 to -1.57, and for comparison classes ranged from +1.04 to -1.14. Scores closest to the ideal were achieved by the experimental class at school E (-.07) and the comparison class at school D (-.12).

Again, the desirable change is for experimental classes to reduce the magnitude of discrepancy scores from pre- to post. Such a change occurred at schools A, D and E, with school E showing the greatest change (-.68 to -.07).

The only comparison class showing a pre- to post reduction in discrepancy scores was school D (-.71 to -.12).

The univariate test results in the area of Affection were of interest at schools C, E and F. At school C, although the pretest discrepancy score for the experimental class was significant, very little change occurred from pre- to posttest. Both classes at school C changed from pre- to post in an undesirable direction. At school F, discrepancy scores from pre- to posttest indicated that both classes changed in an undesirable direction, the change being greater for the experimental class than for the comparison class. At school E discrepancy scores from pre- to posttest indicated that the experimental class changed in the desired direction, while the comparison class changed in the opposite (undesirable) direction.

Summary. The results indicate that only one of the four group comparisons was statistically significantly ($p < .05$) in the expected direction: school E — Inclusion. The remaining three tests were either not strongly supportive of, or statistically significant enough to support, the desirable change. Thus, these results do not demonstrate that the *Heartsmart* program has significantly influenced E-W discrepancy changes.

Contingency Analysis

Impacts of educational programs frequently depend on many conditions. This analysis will explore the possible relationships between outcomes of the *Heartsmart* program and factors within the antecedent and transaction categories of the evaluation model used to guide the overall field test. These relationships will be explored both empirically and logically.

Pupil sex and classroom environment are the two major factors within the antecedent category to be examined in relation to program outcomes. Partly because several experimental teachers independently reported their impression that girls might be benefitting more from the program than boys, an analysis of program outcomes in relation to pupil sex differences was undertaken. An attempt will be made by empirical analyses of the data to verify or refute these teacher impressions of differential sex reaction to the program.

Initial classroom environment had a compelling logical importance as an antecedent factor. Findings relating to initial classroom environment are based on pretest scores of three scales of the My Class Inventory (MCI) measure; these data are not comprehensive and therefore must be considered with caution.

The contingency analysis involving program transactions and outcomes was carried out by logical rather than empirical means. Observational results served as a primary source of data for this analysis. Specific factors to be explored in this analysis relate to the quality of course implementation and student behavior in the classroom.

Sex Factor as Related to Program Outcomes

Table 24 reports multivariate and univariate F Test results in reference to sex differences between experimental and comparison groups on the *What Would You Do?* and *What's Happening?* tests. Of special interest are statistically significant Sex x Treatment interaction effects indicating possible differential effectiveness of the program with respect to sex. Significant multivariate, main effects for sex were obtained at schools B, C, D, F and G, with girls scoring higher than boys at each school. At schools B, C and G, significant multivariate interaction effects were found; inspection of mean scores indicates that experimental girls scored highest at schools C and G and second highest at school B, whereas comparison group boys scored lowest at schools B and G and second lowest at school C. In these three schools, all significant univariate interaction effects were found only on the *What Would You Do?* test.

Analyses of the relationship between the factor of sex and results from the MCI and FIRO-BC were done in the same manner as above. For the MCI, significant multivariate Sex x Treatment interaction effects were obtained from the school data ($F = 2.89$, $p < .05$). Significant

Table 24

Multivariate and Univariate ANOVA Results of
Sex and Sex X Treatment Interaction Effects
on the What's Happening? and What Would You Do? Tests

			Sample Size and Mean Score				Univariate F-Test	
			GROUP				EFFECT	
School	Scale	Sex	N	Experimental	N	Comparison	Sex	Sex x Treatment
A	What's Happening?	Male	12	15.41	10	12.30	1.22	0.04
		Female	11	17.09	11	13.45		
	What Would You Do?	Male	12	8.91	10	6.40	1.35	0.63
		Female	11	10.81	11	6.45		
						MANOVA $F_{(2,39)}$ =	0.83	0.43
B	What's Happening?	Male	14	12.42	14	11.50	8.18**	0.56
		Female	14	14.42	14	14.92		
	What Would You Do?	Male	14	8.21	14	6.85	17.32**	4.63*
		Female	14	14.50	14	8.85		
						MANOVA $F_{(2,51)}$ =	10.90**	2.88
C	What's Happening	Male	13	13.53	15	11.53	3.86*	0.00
		Female	15	15.20	8	13.00		
	What Would You Do?	Male	13	3.53	15	7.13	7.47**	6.56**
		Female	15	9.40	8	7.75		
						MANOVA $F_{(2,47)}$ =	7.90**	3.57*
D	What's Happening	Male	13	14.53	13	12.92	0.37	0.81
		Female	11	16.27	11	16.63		
	What Would You Do?	Male	13	13.15	13	8.76	0.29	1.13
		Female	11	12.54	11	10.63		
						MANOVA $F_{(2,43)}$ =	5.01**	1.14
E	What's Happening?	Male	14	12.07	11	10.36	4.29*	2.28
		Female	14	13.35	13	11.30		
	What Would You Do?	Male	14	9.50	11	5.09	0.07	1.15
		Female	14	9.35	13	7.07		
						MANOVA $F_{(2,51)}$ =	0.90	0.51
F	What's Happening?	Male	14	12.71	16	10.18	10.10**	1.33
		Female	16	15.18	15	10.46		
	What Would You Do?	Male	14	8.21	16	7.06	3.66	0.98
		Female	16	10.06	15	7.73		
						MANOVA $F_{(2,59)}$ =	2.40	1.31
G	What's Happening?	Male	13	11.76	10	10.70	0.21	0.56
		Female	11	13.30	13	11.30		
	What Would You Do?	Male	13	6.92	10	6.30	4.39*	2.99
		Female	11	10.45	13	7.00		
						MANOVA $F_{(2,48)}$ =	2.73	2.63

* $p < .05$ ** $p < .01$

univariate interaction effects, all on the Satisfaction (S) Scale, were found at schools A, B and C. At each of these schools, mean scores on the S Scale declined from the pre- to posttest. Mean scores for boys in the experimental group declined most at schools B and C, and mean scores at school A among comparison group males declined most with experimental girls not far behind.

Analysis of the FIRO-BC, E-W discrepancy score results indicated significant multivariate Sex x Treatment interaction effects ($F_{(3, 46)} = 2.48$) at school E, and significant univariate interaction effects in the area of Affection at schools D and F, and in the area of Inclusion at school E. Discrepancy scores became smallest among the comparison group girls whereas discrepancies increased most among experimental group girls in the area of Affection. Discrepancy scores were reduced most on Inclusion at schools E and F for experimental females.

The overall significant Sex and Treatment interaction results must be summarized in relation to each measure. With respect to the two criterion-referenced tests, girls in the experimental group performed best at three schools; on the S Scale of the MCI, mean scores declined most at two of three schools for boys and declined least for experimental girls at two of three schools. Results from the E-W discrepancy score analysis revealed that discrepancy scores became smallest among experimental girls at two of the three field test sites.

Initial Classroom Environment Factor as Related to Program Outcomes

The principal question addressed in this analysis is whether or not program effectiveness is contingent upon initial classroom environment. From this analysis, it may be possible to determine whether differences between experimental and comparison groups on dependent variable measures are attributable to the effects of instruction in the *Heartsmart* program and/or to variation between groups on initial classroom climate.

First, it was necessary to determine if an empirical relationship existed between measures of classroom environment and program effectiveness. Pearson product moment correlations were computed among the pretest MCI S, F and C Scales the What Would You Do?, What's Happening? tests, and the E-W discrepancy change scores on Inclusion and Affection scales of FIRO-BC. Correlational results indicated only a slight relationship among the sets of variables in the analysis. The magnitude of most correlations (90%) indicated that less than 5% of the variance of the dependent variables was accounted for by the MCI pretest scores. Overall, the results suggested that program outcomes would probably not be significantly affected by classroom climates, which differ on the dimensions measured by the MCI Scales: Satisfaction, Friction and Cohesion.

Program Transactions as Related to Program Outcomes

The previous analyses were directed toward discovering empirical relationships between two antecedent factors, pupil sex and classroom environment, and observed program outcomes. Analyses were also undertaken to uncover any possible relationships between program transactions and outcomes. Of particular interest in the "transactions" category were primarily qualitative factors: the quality of teacher implementation and the quality of student interaction occurring primarily in the Heart to Heart talks.

With respect to the first factor, quality of teacher implementation, observational and interview data were used to rate experimental classes across field test sites on several variables: the amount of time the teacher spent on Heart to Heart talks and lesson "wrap-ups"; the number of optional activities the teacher used; the style or approach used by the teacher in leading Heart to Heart talks; the type and reason for teacher intervention during tape-led lessons; the nature and degree of teacher innovation with respect to introducing new ideas or activities not specifically called for by the program; the teacher's attitude toward students; and the teacher's attitude toward the program.

The quantity and quality of student interaction occurring in the Heart to Heart talks were assessed by means of classroom observations. The classroom observer attempted to record a variety of student behaviors: lesson pertinent verbal interaction; sharing of in-class peer-related experiences; expression of positive and/or negative feelings toward group members; negative reactions (e.g., crying, hitting another pupil); number of students talking during the lesson; and the direction of student talk (e.g., toward the group, the teacher, or individual pupils in the group).

Ratings given by program staff to experimental classes on the factors just described revealed important qualitative differences in program implementation with respect to both teacher and student behavior. However, the differences in ratings were not helpful in explaining variations in performance among field test sites either on the criterion-referenced tests or on the standardized measures. It is suggested here that perhaps the methods of data collection and the means of analyzing the data were too subjective to provide insight into the classroom process and its relationship to program outcomes.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

This chapter summarizes the findings of the *Heartsmart* field test conducted in the spring of 1977. Each of the principal field test questions is addressed in turn; results are summarized; conclusions are drawn; and recommendations are made. Finally, the overall contents of the chapter are summarized, and tentative claims for the program are formulated.

Question 1: To what extent might the program be harmful to learners with respect to educational and psychological effects?

Summary of Results. The question above was rephrased and posed to the three external consultant reviewers whose reports are summarized in Section I of Chapter Four. Reviewers responded with varying degrees of directness. Their opinions are summarized below.

- Schutz found the program to be theoretically sound, and anticipated great success especially with an aware teacher.
- Ramsdell considered it to be a great program.
- Agazarin believed the impact of the program would have a positive influence on the psycho-social growth of program students, and was of particular importance to inner-city children.

Each consultant reviewer identified specific lessons, situations, concepts or methods that he or she considered disadvantageous in some way or another. These "disadvantages" relating to potential harm are summarized below.

- Such situations as running away from home, taking candy from a stranger behaving "differently" in ways that may be harmful to others, and arguing aggressively with parents, although presented in the fantasy of *Heartsmart*, are not socially acceptable realities.

- Anthropomorphis of machines, such as the OOPSER, is undesirable.
- The blackmail and subsequent reward in Lesson 19 are undesirable, and are similar to the dependency and reward in Lesson 28.

Although Question 1 was not posed directly to persons involved in the Affirmative Action Review (Section II of Chapter Four), the independent reviewers did address the question. Results from the independent review relating to potential harm are summarized below.

- There is possible value-conflict for Black children if they are taught to believe that expression of feelings in any situation is right and will be rewarded.

Further data relating to Question 1 are discussed in Sections III and IV of Chapter Four. Of particular relevance is the discussion about Heart to Heart talks under the subheading Interpretation and Disposition in Section III. Results based on observational data of classroom implementation are summarized below.

- Teachers did not contradict program concepts, but did introduce variations of their own related to that which they considered "best" for their students. For the most part program staff considered such variations to be harmless.
- Teachers who were judgmental (of statements volunteered by students), manipulative (of students' desires and expressed feelings or behaviors),

or bored (by students' accounts) may have caused a small amount of psychological harm. However, it may be argued that such behavior would be characteristic of those teachers and not solely related to or directly stimulated by *Heartsmart*.

- Student and teacher opinion surveys and interviews did not indicate that the program was harmful in any way.
- Possible disadvantages as identified in the Information Pages (Appendix A), occurred to a very slight extent as illustrated by students' responses to the group survey.

Conclusions. Generally speaking the field test version of *Heartsmart* may be perceived as relatively harmless. However, some concepts could be perceived as harmful by some individuals. Also, certain situations or elements of the program are potentially harmful, and directions to the teacher allow too much latitude for potentially harmful variations.

Recommendations. In order to anticipate and attempt to prevent potential harm to students, all relevant directions to the teacher should be expanded and clarified, and presented in such a way that the teacher is likely to be disposed to carry out the directions as intended.

All suggestions and criticisms made relating to potential harmfulness should be considered carefully; revisions to relevant lessons and materials used by students and teachers should be made.

Question 2: Are racial/ethnic minorities and both sexes fairly represented in the program materials, and are those materials unbiased in their treatment of sex and racial/ethnic differences?

Summary of Results. The results for this question are presented in full in Section II of Chapter Four.

- Approximately 56% of the characters were male, and 44% were female.
- Of those characters whose race or ethnicity could be determined to some degree, approximately 68% were white and 32% were non-white.
- Generally speaking males played superordinate roles with characteristics such as intelligence, independence, self-confidence and adventurousness.
- Generally speaking females played subordinate roles with characteristics such as naivety, dependence, shyness, vanity and prettiness.
- Activities, interests and behaviors of white characters were perceived as being more socially positive than were those of non-white characters.
- Illustrations of non-white characters, and the taped voices of those characters did not allow for accurate discrimination among Blacks, Asians, or persons of Oriental, Hispanic or Native-American origin.

Conclusions. Findings with respect to Question 2 suggest that while social fairness in the materials may have been achieved in quantitative terms by representing males and females and whites and non-whites in proportions recommended by RBS *Guidelines for Affirmative Action in RBS Products and Services*, a pervasive sex and racial/ethnic bias is present in the portrayal of female and non-white characters.

Recommendations. All illustrations and related taped voices should be determinate in terms of race or ethnicity. A balance of superordinate and subordinate roles and positive and negative characteristics should be achieved across sex and race or ethnicity. Qualitative representation (nature and extent of participation) should be considered as well as quantitative representation by sex and race or ethnicity.

Question 3: Were all essential parts of the program implemented as intended?

Summary of Results. Implementation is discussed at length in Section III of Chapter Four.

- All structured lessons, i.e., the tape-led lessons and Heart to Heart talks, were implemented in the given sequence, without omissions or major changes, at all sites.
- All imperative directions were followed at all sites.
- All guiding directions were followed at all sites with some slight variation influenced by teachers' dispositions.
- Discretionary directions were followed at all sites with considerable variation among classes.
- Where little or no direction was given, teachers initiated innovations, the greatest of which was the "wrap-up" at the end of tape-led lessons.
- Dispositional differences in implementation were most apparent in Heart to Heart talks, and in the number and nature of optional teacher-led activities.

Conclusions. The program was implemented as intended at all sites, and was not distorted by variations and innovations. However, it is important to remember that these results are based on a field test situation in which each class was visited by an observer about once every four lessons; without such observation it is possible that teachers would introduce greater variations and/or innovations.

Recommendations. Clarify all directions to the teacher. Provide for ways in which the teacher may conduct a "wrap-up" after a tape-led lesson. Provide greater clarification of the rationale for the program and its concepts and goals, so that teachers will be more likely to introduce appropriate innovations, and to appreciate the kinds of variations most suitable to the program.

Question 4: Was the program educationally appealing and worthwhile to teachers and students?

Summary of Results. Section IV of Chapter Four discusses results related to this question. General findings are summarized below.

- The majority of students enjoyed the tape-led lessons and games, finding the latter easy.
- Teachers rated the concepts of the tape-led lessons important to their students' lives, and found the program easy to administer.
- The majority of students enjoyed the Heart to Heart talks, found them interesting, and wanted to talk more.
- Most teachers found the concepts of the Heart to Heart talks to be worthwhile and easy to administer, although there seemed to be some

doubt as to the value of the last Heart to Heart talk (Lesson 29).

- Students and teachers reported having enjoyed the optional activities. However, data indicated that fewer optional activities were used in the last two-thirds of the program than in earlier lessons.
- Most students enjoyed working in groups, but there was some disparity among individuals, groups, and classes relating to group roles, especially that of leadership.

Conclusions. Generally speaking the program was appealing to at least 75% of the students with little difference among sites, and was appealing and considered to be educationally worthwhile by the teachers.

Recommendations. Although *Heartsmart* is not a cognitive program, the question of easiness of the tape-led games should be considered, balancing students' perceptions of achievement with the program objectives. Perhaps some tape-led games should be more challenging.

The Heart to Heart talks should be structured to allow for maximum participation of students. Lesson 29 should be revised, perhaps to summarize some of the major program concepts.

Optional activities should be reorganized and/or added to, so that those presented in Units II and III appeal to the teachers, and so that overall there is a wide variety of activities from which a teacher may choose.

Group skills and group roles, especially leadership, should be taught and/or discussed.

Question 5: How well did students perform on instructional tasks of the program, which reflect achievement in understanding and knowledge acquisition?

Summary of Results. In Section V of Chapter Four, discussing student achievement, reference is made to Gamepages and Reviewpages. The former were designed to allow for practice of affective concepts. The latter were designed to measure cognitive comprehension of those concepts. In light of the question as phrased, only the results relating to the Reviewpages are discussed here.

- Analysis of Reviewpages from a random sub-sample of students in *Heartsmart* classes showed that approximately 95% of the questions were answered correctly by all students.

Conclusions. The Reviewpages probably did not accurately assess "true" levels of student achievement in understanding what the program taught in the tape-led lessons. The questions asked on the Reviewpages were probably too easy. Since the Reviewpages were not administered to non-*Heartsmart*-instructed students, it is impossible to judge achievement in a comparative way. Attempts to construct a "mastery test" for the program, as described in Chapter Two, showed that non *Heartsmart*-instructed students could perform equally as well as *Heartsmart* students on the Reviewpages. The evidence presented in this study leads to the conclusion that almost all *Heartsmart* pupils can grasp the main ideas presented in the tape-led lessons, although other factors (e.g., general knowledge, common sense, the effects of socialization in our society) besides *Heartsmart* instruction may account for student achievement results.

Recommendations. Delete the tape-led review and the related Reviewpages in the Student Journals. Provide teachers with review questions of varying levels of difficulty to be used as part of the teacher-led "wrap-up" at the end of each tape-led lesson.

Question 6: How effective was the program in terms of accomplishing its major instructional goals and objectives?

Summary of Results. Effectiveness data are presented in detail in Section VI of Chapter Four.

- At all field test sites, *Heartsmart* program students demonstrated significantly higher performance than comparison group students in criterion-referenced tests.
- The specific areas in which *Heartsmart* program students appeared to excel over comparison group students were: identifying feelings and behaviors and inferring feelings from behavior in others; identifying ways in which people may behave when they have certain feelings; determining feelings in others by asking; and expressing needs and desires and taking actions to accomplish them.
- *Heartsmart* program students reported learning interpersonal skills consonant with most of the instructional objectives of the program, excluding perhaps the following objective: expressing individual needs and desires and taking appropriate actions to accomplish them. (The only data available for this objective, other than the

criterion-referenced tests, were subjective judgments made by observers, who could report only superficial and general observations. Although it is possible that within small groups this objective was achieved, there is no related data since the small group interaction was not closely observed or evaluated.)

- Program students reported having expressed their feelings to others more often after the program than before.
- Several teachers reported instances in school where *Heartsmart* program students used interpersonal skills outside of class situations.
- The classroom environment of *Heartsmart* classes did not consistently become more cooperative and satisfying relative to comparison classes, based on standardized measures; students and teachers reported a tendency toward increased cooperative behavior and less friction in the experimental classes from the beginning to the end of the program. (Observational data, for the most part, supported teachers' findings).
- Expressed-Wanted discrepancy scores in the areas of Inclusion and Affection among *Heartsmart* program classes did not become significantly smaller from pre- to posttest compared with non-*Heartsmart*-instructed classes.

Conclusions. The *Heartsmart* program appears to be successful in achieving the objective of teaching students several specific interpersonal skills, and possibly of facilitating the application of these skills to out-of-class peer and adult interpersonal situations. The results from the criterion-referenced tests provide strong statistical evidence of program effects in the expected direction; it is difficult to find a plausible alternative explanation for the observed results on these tests given the overall strength and consistency of those results across field test sites.

No definitive conclusion is reached with respect to the program's ability to improve the psychological climate of the classroom. Results from comparative group data on the MCI were generally contradicted by student self-report and teacher observations/perceptions of student classroom behavior over time. The discrepant findings might be partly explained by the low reliability of measurement in the MCI scales. Also, it is possible that the positive scales of Cohesion and Satisfaction (of the MCI) were negatively influenced by students' experiences within their small groups if these experiences were unsatisfactory, and that the negative scale of Friction (of the MCI) was similarly influenced. However, the nature and extent of data collection for student self-reports did not allow for comparative analysis with MCI results; so such a conclusion must be extremely tentative.

The quality and quantity of evidence presented in reference to evaluating the program's ability to produce a better match between students' expressed and wanted interpersonal needs in the areas of inclusion and affection behavior were insufficient to reach a definitive conclusion.

Recommendations. Allow for greater practice of interpersonal skills, possibly through the use of optional teacher-led activities. Decrease the likelihood of friction within small groups by providing training in group roles and skills. Allow for evaluation by providing the teacher with criterion-referenced tests, scoring keys, and directions for administration and interpretation of results.

Question 7: What factors among antecedent conditions and program transactions relate to the nature and extent of program effectiveness?

Summary of Results.

- Significant multivariate and univariate Sex by Treatment interaction effects were found on the *What's Happening?* and *What Would You Do?* tests at three of seven field test sites; girls in the experimental group obtained the highest mean scores.
- Significant univariate Sex by Treatment pre- to posttest interaction effects were found on the Satisfaction scale of the MCI at these three schools; scores among boys in the experimental groups declined most at all three schools.
- Significant univariate Sex by Treatment interaction effects were found at three schools on Expressed-Wanted discrepancy change scores on the FIRO-BC Affection and Inclusion scales; the largest reduction in E-W discrepancy scores occurred among experimental girls at two of the three schools.
- Correlations between pretest MCI scales and performance on the *What's Happening?*, *What Would You Do?* and the FIRO-BC E-W discrepancy change measures were very low.
- Although variations in program implementation occurred, they seemed to have very little impact of program effectiveness as measured by standardized and criterion-referenced tests.

Conclusions. The significant relationships between pupil sex and program outcomes at some field test sites show a tendency toward differential impact of the program according to sex. This conclusion applies more strongly to those program outcomes measured by the criterion-referenced tests. Girls in the experimental classes outperformed any other combination of sex by group, suggesting, perhaps, that the program may be more effective with girls. This matches the impressions of at least three experimental class teachers who suspected independently that girls were benefitting more than boys from the program. Experimental group boys, however, also did better on the average than boys in comparison classes.

Educational outcomes of the program were not found to be related to the pre-existing social climate of the classroom. This finding would suggest that highly negative (e.g., hostile, uncooperative) classroom social climates should not deter teachers from using the program. Whatever benefits accrue to students from being exposed to the program do not appear to be influenced by the level of perceived hostility or dissatisfaction among students in the classroom.

It is interesting to speculate on finding no meaningful relationship between the nature and extent of variations in implementation and program outcomes. The potential for impact may be inherent in the prepared audio tapes which account for 24 of the 30 lessons in the course. The quality of implementation may, therefore, not be so much a function of the teacher. Differences in the quality of implementing this program might be less important than for other educational programs.

However, it is important to note that these findings and conclusions are based on the somewhat artificial situation of a field test during which teachers and students knew that a program observer would be present for approximately 25% of the lessons. This factor may well have influenced teachers and students, possibly by preventing or curtailing any strong variations outside the given program guidelines. It is also important to bear in mind that field test teachers were selected or invited by their school principals, were experienced, and participated in the field test willingly.

Recommendations. The pre-field test teacher training and the support and assistance provided by program staff during the field test may not always be provided if or when the program is made publicly available. Therefore, a suitable substitute should be designed so that teachers will be likely to implement the program as intended, and all information and directions provided for teachers should facilitate desirable outcomes.

Overall Conclusions

It is appropriate to conclude this chapter with statements about the major strengths and weaknesses of the *Heartsmart* program.

- The *Heartsmart* program is likely to provide an appealing, educationally relevant and worthwhile experience to fourth grade children regardless of ethnic/racial and/or socio-economic background.
- The *Heartsmart* program as a whole can be easily administered by the teacher, although certain activities require special group process skills to achieve maximum results.

- The *Heartsmart* program will teach fourth grade students to be more proficient in: identifying feelings and inferring feelings from the behavior of others; identifying ways in which people behave when they have certain feelings; determining feelings in others by asking; expressing needs and desires and taking appropriate actions to accomplish them; and expressing feelings.

The above claims represent the minimal number of areas of major program strengths as determined in this field test. In its current form, however, there are two deficiencies in the program.

One deficiency relates to sex and racial/ethnic bias in the program materials, wherein female and non-white characters tend to be portrayed in stereotypic terms. A fully documented account of revisions made to the program based on the field test results is presented in Chapter Six. A major part of the revision work was designed to remove the social bias in the materials. The next and final version of the *Heartsmart* program should reflect a more positive and realistic view toward sex and racial/ethnic differences as depicted in the characters of the program.

The second deficiency relates to the nature and extent of information directed to teachers, to increase their understanding of program goals, and to facilitate the application of appropriate teaching methods and skills. This suggests reorganization, expansion and revision of the teacher's manual.

CHAPTER SIX: PROGRAM REVISIONS

This chapter describes the revisions made to the program on the basis of findings discussed in the preceding chapters of this report, and taking into consideration the fact that subsequent use of the program is unlikely to include the training and assistance provided for the teachers in the field test. Thus, where practical, suggestions and recommendations made in Chapter Five have been incorporated in the final revised version (RV) of the program in an attempt to provide a program which is effective, acceptable and appealing, and which can be used by teachers unfamiliar with the program or its goals.

Each of the three sections of this chapter relates to a component or major area of the program, namely: the teacher's manual; the dramatized story and its characters; and student materials. In each case the RV and field test version (FTV) are compared and reasons for revisions are identified and discussed.

I. THE TEACHER'S MANUAL

For a program such as *Heartsmart*, two questions are important in the development of the teacher's manual. They are: (1) What does the teacher need to know? and (2) How can the necessary information be presented in such a way as to facilitate reference and application? In addition to these two general questions, a third is also important in as much as the final version of the manual must stand alone; technical assistance or training may not always be given if or when the program is marketed. This third question is (3) What materials should be included to facilitate self-training of the program teacher(s)?

An outline of the major sections of both the FTV and the RV manual is presented in Table 25. The table shows that the manual was reorganized into five sections. Each of those sections is discussed.

Introduction to the Teacher's Manual

Material considered to be introductory in nature was found in four sections of the FTV manual. Since teachers found this organization confusing, reorganization was necessary. A summary of the RV Introduction is presented below, with notes referring to the nature and extent of revisions made.

Program description. Based on material from the FTV sections titled "program organization" and "program goals," this section was revised in order to clarify the content.

The teacher and the program. The related FTV section titled "using the teacher's manual" presented a summary of the contents of the manual and was found on page 11. In the RV this section advises teachers to follow a five step process to familiarize themselves with the program and related tasks. This revision was suggested orally by a field test teacher.

Description of materials. The FTV manual did not identify or describe materials. This section is new content included to facilitate program implementation.

Theoretical rationale. Based on material from the FTV manual Unit

Table 25

Comparison of the Contents of Two Versions of the Teacher's Manual

Field Test Version	Revised Version
Introduction Program goals; Program organization; The teacher's role (including - scheduling, administration, optional activities, songs, Heart to Heart talks); Evaluation; Using the teacher's manual; Trouble shooting - about materials, student behaviors, parents. Unit I: Introduction - unit goals and objectives; General procedures - administration; Heart to Heart discussion guidelines; Summary of Unit I procedures; Lesson notes for Lessons 1-12. Unit II: Introduction - overview, theoretical rationale for Units II and III, goals and objectives for Unit II, forming the groups, group leadership and leadership training, classroom organization, songs; General procedures - administration; Summary of Unit II procedures; Lesson notes for Lessons 13-21. Unit III: Introduction - overview, goals and objectives for Unit III, group leadership, songs; Summary of Unit III procedures; Lesson notes for Lessons 22-30. Appendix A: Tape script for group leadership training sessions. Appendix B: Handout pages for activities, song sheets, instructions to substitute teachers, and a group roster page.	Introduction: Program description; The teacher and the program; Description of materials; Theoretical rationale; Goals and objectives; Administration; Heart to Heart discussion guidelines; Group formation; Group leadership; Group training lesson; Evaluation. Lesson Notes: Lesson notes for all lessons. General Activities: Vocabulary Study Center Homework Inclusion Control Affection Stories Songs Follow Through suggestions for activities for each given sub-heading Workshop Guide: Overview; Rationale; Moderating the Workshops; Workshop #1 - Self-Training Session Workshop #2 - Sharing Session Workshop #3 - Planning Session Handouts: Handout pages for activities; song sheets; instructions to substitute teachers; script for group training lesson; information pages; copies of evaluation measures.

II Introduction, this section was expanded in order to clarify concepts questioned by field test teachers.

Goals and objectives. Although content remained relatively unchanged, FTV material was reorganized and condensed, and is presented as one complete section of the RV manual Introduction, rather than in several sections with repetition.

Administration. This section is similar to the administrative directions given in various parts of the FTV manual, and includes minor additions.

Heart to Heart discussion guidelines. This section is different in both organization and content. Organizational changes were made to clarify content and avoid repetition. Content changes relate to the teacher's role and include discussion of productive and counter-productive attitudes and behaviors. Suggestions are given for varying the presentation or methods of response for the Heart to Heart talks. Some of the trouble-shooting material from the FTV is included in this section.

Groups. In the FTV manual, group formation guidelines were presented in the Unit II section. In that same section leadership was discussed, the teacher being directed to orient student group leaders by playing a leadership training tape, and helping those student leaders to follow the directions given on the tape. These directions related primarily to administrative duties such as distributing materials.

The leadership tape became obsolete when the materials were redesigned so that group administration was no longer a concern.

Criticism of the methods used for group formation, and strong suggestions for group training rather than leadership training indicated that major changes should be considered.

In the RV manual, the group formation methods are modified. Leadership is discussed with a stronger emphasis on traits facilitating group maintenance rather than on administration. The leadership tape has been replaced by a teacher-led lesson for all students focusing on group skills and behaviors. In this lesson volunteer students dramatize a script (included in the Handouts section), role-playing imaginary students involved in a *Heartsmart* lesson. Students in the audience identify positive roles and behaviors dramatized, and discuss them with the teacher.

Evaluation. In comparison to the FTV discussion titled "How do you know the program is working?" the RV section on evaluation is more formal. The subjective evaluation methods discussed in the FTV have been revised and expanded. Descriptions of What's Happening? and What Would You Do? (two criterion-referenced measures used in the field test) are given, together with guidelines for their use, scoring keys, and guidelines for interpretation of the results. Copies of the measures are included in the Handouts section of the RV manual. No measures were discussed or used in the FTV.

Lesson Notes

In both the FTV and RV manuals, lesson notes pages consist of notes to the teacher, summaries of the taped story and tape-led activity, reduced copies of student materials, and suggestions for teacher-led activities relevant to the given lesson. Lesson notes pages to the Heart to Heart talks, in both versions, consist of teacher's notes and main points and questions to focus the discussion.

The FTV teacher's notes presented lesson objectives, materials needed, new vocabulary, and special instructions, where necessary. This format is retained in the RV. Review questions are also included in the RV.

In the field test each lesson was reviewed by the teacher-on-the-tape, who asked five comprehension questions requiring "yes" or "no" answers. Students responded by checking appropriate responses on Reviewpages. Correct responses were then given by the teacher-on-the-tape. The content of most review questions in the RV is similar to that of the FTV but questions are phrased differently, some new questions are included, and all are posed by the classroom teacher and discussed orally. The administration section of the RV Introduction discusses the review questions and acceptable student responses. This revision was made for several reasons. In the field test classroom teachers wanted to participate in the tape-led lessons and often reviewed each lesson after the tape had finished. The students found the review boring and the questions too easy. Analysis of student achievement supported the students' latter reaction. Teachers and RBS staff considered oral review preferable to a pencil and paper review.

Two relatively minor changes in the RV teacher's notes are (1) the explication of points of difficulty with suggested procedures for alleviating or eliminating the source of difficulty, and (2) the addition of "special notes" which are used to elaborate upon concepts or situations in the story. For example, one note suggests that the teacher may differentiate between reality and fantasy, and explain that although in the story Jack accepts candy from the Far Out Fish, in reality students should not accept gifts from strangers.

Summaries of the taped story and tape-led activities, and copies of student materials were revised in accordance with relevant changes in those areas.

Suggestions for teacher-led activities were modified to avoid repetition across lessons and to ensure that activities suggested are lesson-specific. (See also Activities below.)

The teacher's notes for the Heart to Heart talks were changed in format to enable a clearer and more concise presentation of the procedural requirements for each talk, and to include suggestions to the teacher to refer to the discussion guidelines given in the Introduction of the teacher's manual to determine possible variations. The RV Heart to Heart teacher's notes are organized under the headings: objectives, preparation and directions. The main points and questions are somewhat modified.

Lesson specific activities. The optional teacher-led activities found in the FTV manual underwent several organizational changes. In the RV manual activities are included with each set of lesson notes (as they were in the FTV) and have been labeled "lesson specific," to differentiate them from those grouped in an entirely new section of the manual containing general activities.

The lesson specific activities in the RV manual, included with the lesson notes, consist of those from the FTV which were not removed to the general activity section, and relevant additions. The original presentation divided the activities into those which were designed for individuals, and those designed for groups, but such classification was sometimes erroneous and frequently misleading. In the RV lesson specific activities, the classification is not used.

Table 26 indicates that there were 152 lesson specific activities presented in the FTV. (Forty-two of those activities were repetitions, equalling 6 different activities, each repeated on average 7 times.) There are 120 RV lesson specific activities, made up of 64 unchanged or slightly revised FTV activities and 56 new activities. Those FTV activities not included as RV lesson specific activities were omitted for one or more of the following reasons: (1) they were in the group of 42 repeated activities which were general across the program rather than specific to a given lesson; (2) they were unappealing to teachers

Table 26

Lesson Specific Activities as Presented in Two Versions of the Teacher's Manual

	FTV[1]	RV[2]			
Lesson Number	Number of Activities in FTV	Number of Activities in RV	Number of Retained Activities from FTV	Number of Revised Activities from FTV	Number of New Activities
1	8	4	1	1	2
2	7	6	2	1	3
3	6	4	1	-	3
4	6	5	1	2	2
5	8	6	4	-	2
7	6	6	4	-	2
8	7	5	3	-	2
9	6	5	3	-	2
10	9	6	2	1	3
11	6	3	2	-	1
13	5	6	3	1	2
14	7	5	3	1	1
15	5	6	2	-	4
16	6	5	2	1	2
18	4	4	1	1	2
19	5	7	2	-	5
20	7	6	3	-	3
22	7	5	3	-	2
23	6	5	2	-	3
24	6	5	1	2	2
26	7	4	1	1	2
27	7	3	2	-	1
28	6	3	1	-	2
30	7	6	1	2	3
Totals	152	120	50	14	56

[1] FTV = Field Test Version of Teacher;s Manual

[2] RV = Revised Version of Teacher's Manual

and students; and/or (3) they were essentially minor constituent parts of other activities.

General Activites

The General Activities section, is a new addition to the teacher's manual, and was considered necessary for organizational and enrichment purposes. More specifically, the reasons for developing a separate and and comprehensive activities section were:

- to select from the lesson specific activities those which apply equally well to all lessons, and thus reduce repetition;
- to incorporate in the RV, activities used and recommended by field test teachers;
- to organize some of the FTV activities into a meaningful framework for easy reference and appropriate use;
- to provide activities which require parental involvement;
- to provide for transfer of concepts to other curricula;
- to provide activities designed for active rather than passive learning;
- to help facilitate freedom of expression positively and constructively;
- to enhance program concepts during and after the conclusion of the program through application of concepts in new and different ways outside the classroom.

The 92 activities suggested in the General Activities section of the RV manual consist of 15 FTV activities condensed from the 88 FTV activities deleted from the lesson specific group, plus 77 new activities.

Table 27 briefly describes the contents of the General Activities

Table 27

General Activities as Presented in the Revised Version of the Manual, with Reasons for Additions

Activities	Reasons	Number
Vocabulary - words and phrases with program-specific meanings, and/or above 4th grade level.*	Listed in lesson notes in the FTV, vocabulary was not defined, and no related activities were suggested. Revision designed to increase comprehension.	4
Study Center - methods suggested for organizing a study center, plus activity directions for students to work individually.	Six of the activities were in the FTV; eight were developed either by field test teachers or program staff. Two field test teachers organized study centers, and others were interested in the idea.	14
Homework - three activity suggestions for each unit, each activity designed to involve parents and/or family members.	Two of the activities were in the FTV; seven were developed either by field test teachers or program staff, in response to needs identified by consultant reviewers and/or teachers.	9
Inclusion - activities classified in the areas of: cooperation; shyness and loneliness; showing off and getting attention; and selfishness and being alone.	Designed by program staff, the activities reinforce positive aspects of Inclusion, using a variety of methods and skills, and were developed in response to suggestions from teachers and/or consultant reviewers.	15
Control - activities relating to leadership and group roles and skills.	Designed by program staff, these activities were developed in an attempt to resolve or avoid conflicts observed in small groups during the field test.	5

*Grade level determined according to Revised Care Vocabulary (Educational Development Laboratory, McGraw-Hill, 1968).

Table 27 contd.

Activities	Reasons	Number
Affection - activities classified in the areas of: friendship; aggression; and self-esteem.	Designed by program staff, these activities reinforce positive aspects of Affection, and allow for acceptable ways in which anger or aggression may be expressed, and were developed in response to suggestions made by consultant reviewers and/or teachers.	21
Stories - an annotated bibliography of 20 short stories relating to program objectives, to be read by the teacher to the students.	Selected by teachers or program staff, these stories reinforce program objectives.	1
Songs - three suggestions for ways in which program songs (presented on song sheets and on an audio cassette tape) may be used.	Suggestions implied in the FTV were clarified.	3
Follow Through - suggestions for sharing program concepts or following through after the program has been completed, classified under the headings: Adopt a Class; School Project; and Community Project.	Designed by program staff and field test teachers, these activities were developed in response to suggestions made by consultant reviewers and/or teachers.	20

section and presents reasons for additions.

Workshop Guide

As stated in the introduction to this section, it was considered necessary to provide materials for program teachers that could take the place of the training and technical assistance provided during the field test. The Workshop Guide is therefore a new addition to the manual, and contains directions for three workshops, each having a different emphasis and directed toward a different group of participants, but all designed to facilitate program teachers' understanding and implementation of the program. Guidelines for each workshop are preceded by scenarios designed to increase the teachers' comprehension and confidence, and to facilitate implementation of the workshops.

Workshop #1. This self-training session is to be conducted before the program is introduced into the classroom, and is designed for the school principal and program teachers to facilitate comprehension of program concepts, goals, and guidelines; to provide opportunities for familiarization with program materials; and to involve participants in experiential activities related to the program. Although it is possible for teachers to familiarize themselves with the program in isolation, it is preferable for teachers to experience some program activities and to discuss concepts and possible problems with their peers. The moderator of the workshop is to be a teacher planning to use *Heartsmart*, or a person with training and experience related to the program goals.

Workshop #2. This sharing session is directed at those people most likely to feel the impact of the program through the behaviors of program students in situations outside the classroom (e.g., parents, non-program teachers). Since *Heartsmart* teaches interpersonal skills which necessarily are used with people outside of the classroom, it is important that these "outsiders" (at least the most important outsiders) understand the intent and nature of the program so as not to misinterpret a child's motivations when applying program skills. The program teaches behaviors that, traditionally, are not expected from fourth graders and which, consequently, are difficult to accept or comprehend. For example, an honest request from a student to know specifically how a teacher or parent is feeling in a conflict situation may easily be misinterpreted as insolent. Workshop #2 attempts to educate parents and other individuals as to what the *Heartsmart* program teaches and, more importantly, what types of behaviors to expect from students participating in the program. In addition, it attempts to develop in these individuals a desire, as well as the knowledge needed, to promote *Heartsmart* skills at home and in other situations. The workshop is to be conducted midway through the program by a program teacher. Parents, non-program teachers, and other individuals are to be invited to attend.

Workshop #3. This planning session is designed to be conducted toward the end of the program to allow program teachers and other faculty to evaluate the impact of the program and to plan ways in which positive results may be fostered and continued. It is considered important that the skills and behaviors taught in the program be reinforced, in both school and family environments, after program completion. The workshop is intended to serve as a planning session for ways in which the school and community may facilitate the continuation of student practice of *Heartsmart* concepts. The moderator of the program is to be a program teacher and/or the school principal. Program teachers, the school principal and other faculty are to participate; parents and district-level personnel may also be invited.

Handouts

The "Handouts" section of the RV manual is essentially synonymous with the appendices found in the FTV manual (see Table 25). Certain items have been deleted or added to reflect the content and organizational changes made to the other sections of the manual. Table 28 lists FTV and RV handouts and includes revision comments.

II. THE DRAMATIZED STORY

The story, dramatized in 24 audio tape installments, presents the program concepts. Needed revisions were determined by the results of the affirmative action review and comments and suggestions made by consultant reviewers (see Chapter Five). Revisions are discussed under two headings: revisions to the story; and revisions to program characters.

Revisions to the Story

All revisions to the story are relatively minor. They are summarized in Table 29, which lists changes made and reasons for those changes.

Table 28

Comparison of Handouts in Two Versions of the Manual

FTV Handouts	RV Handouts	Comments
3 story summaries with missing words to be filled in by students.	FTV handouts abbreviated and rewritten.	FTV readability averaged 8th grade. RV readability averages 3rd grade.*
3 word searches.	FTV handouts reduced from 3 pages to 1 page.	Redesigned to reduce teacher's work load.
8 song sheets.	FTV handouts redesigned.	FTV words and music too small for students to read.
Instructions to substitute teachers.	FTV handouts revised.	Revisions relate to redesign of materials.
	Two dot-to-dot pictures of story characters.	New handout, for fun.
	Script for group training lesson.	New material, necessary to teach students group roles and behaviors.
	Tell-a-gram Happygram	New material to be used by students, parents, and workshop participants.
	Information pages describing the program.	New material to be used by workshop participants.
	Copies of criterion-referenced measures: What's Happening? and What Would You Do?	New material to allow for evaluation.
Crossword puzzle.	FTV handout deleted.	FTV design and content irrelevant to RV.
Group roster.	FTV handout deleted.	Unnecessary.
Leadership training script.	FTV material deleted.	FTV script replaced by group training script and lesson.

*Readability determined by the Readability Graph, Edward Fry, Journal of Reading, April, 1968. .

Table 29

Comparison of Story Elements in Two Versions of the Program with Revision Comments

Lesson #	FTV Story	RV Story	Comments
1	Fast heartbeat related to anger and fear.	Fast heartbeat related to any strong emotion or physical effort.	FTV inaccurate and misleading.
9	Computer broke down emotionally and experienced feelings.	Computer breaks down mechanically due to data overload.	Anthropomorphis of machine considered undesirable.
11	Parents nagged Jack about brushing his teeth; Jack expressed anger.	Parents scold Jack for getting dirty; Jack expresses anger because parents jumped to conclusions.	Cultural norms upset; situation needed in which Jack's anger is more justifiable.
15	Central character meets a dragon.	Dragon deleted.	Too fantastic in otherwise realistic episode.
19	Central characters rewarded by much attention (inclusion).	Central characters 'have their say' (control).	Change necessitated by FIRO structure.
28	Central character assured that everyone liked her; no mention of her liking herself.	Central character learns self respect and esteem.	Self-esteem is an important concept of the program.

Revisions to Program Characters

Revisions to program characters include changes of sex, race or ethnicity, and behavioral characteristics. The nature and extent of such revisions were determined by the findings and recommendations described in the Affirmative Action Report (Section III of Chapter Five) and in the Consultants' Reviews (Section IV of Chapter Five), and were influenced by considerations of time, cost, and suitability in terms of the existing story line.

Table 30 summarizes the quantitative revisions made to program characters.

Table 31 compares the total numbers and percent of representation of human characters as presented in Table 5 (from the Affirmative Action Report) and Table 30, and percent representation called for in the RBS *Guidelines*.

Although, quantitatively, representation by ethnicity in the RV does not equal the representation required by Affirmative Action, qualitatively the revisions are considered appropriate and necessary.

Tables 32 and 33 indicate revisions made to program characters. In both tables each character is described as portrayed in the FTV materials used in spring 1977, and as portrayed in the RV. Each of the headed columns should be self-explanatory with the possible exception of "visibility."

Visibility is measured on two scales. One is quantitative, relating to the number of illustrations of a given character, the number of

Table 30

Number of Characters Presented in the Revised Version of the Program, Broken Down by Sex and Ethnicity

			Sex[1]			Ethnicity[2]					
Characters		Total No.	M	F	?	W	B	A	H	N-A	?
Main Characters Human	N	9	4	5	-	6	2	-	1	-	
	(%)	(5.8)	(45.0)	(55.0)		(67.0)	(22.0)		(11.0)		
Main Characters Non-Human	N	17	9	5	-	-	-	-	-	-	17
	(%)	(10.9)	(53.0)	(47.0)							(100.0)
*Supporting Characters Human	N	72	42	30	-	47	15	3	5	2	-
	(%)	(46.5)	(58,0)	(42.0)		(65.2)	(20.8)	(4.1)	(6.9)	(3.0)	
Supporting Characters Non-Human	N	4	3	-	1	-	-	-	-	-	4
	(%)	(2.5)	(75.0)		(25.0)						(100.0)
*Activities Characters Human	N	53	26	27	-	33	15	3	2	-	-
	(%)	(34.3)	(49.0)	(51.0)		(62.3)	(28.3)	(5.7	(3.7)		
Total	N	155	84	70	1	86	32	6	8	2	21
% of Total	(%)	(100.0)	(54.2)	(45.2)	(.6)	(55.4)	(20.6)	(3.8)	(5.3)	(1.2)	(13.7)

1 Sex: M = male F = female

2 Ethnicity: W = White B = Black A = Asian
H = Hispanic origin N-A = Native American

*The total numbers in these two groups were reduced from the field test version.

Table 31

Comparison of Total Representation of Human Characters by Sex and Ethnicity for Two Versions of the Program Materials Compared Against Balance Required by Affirmative Action

			Sex*		Ethnicity**					
	Total N		M	F	W	B	A	H	N-A	?
Affirmative Action requirement	100		50% (±10%)	50% (±10%)	75% (±10%)	18% (±15%)	2% (±1%)	2% (±1%)	2% (±1%)	
Field test version	181	N	104	77	80	37	0	0	0	64
		%	(57.5)	(42.5)	(44.2)	(20.4)	0	0	0	(35.4)
Revised version	134	N	72	62	86	32	6	8	2	
		%	(53.7)	(46.3)	(64.2)	(23.9)	(4.5)	(5.9)	(1.5)	

*Sex: M = male F = female

**Ethnicity: W = White B = Black A = Asian
H = Hespanic origin N-A = North American

Table 32

Human Characters Represented in Two Versions of Program Materials

Characters	V*	Field Test Version			Revised Version		
		Sex	Ethnicity**	Behavioral Characteristic	Sex	Ethnicity**	Behavioral Characteristic
Jack	VH	M	W	active, independent	M	W	active, independent
King	M	M	W	sensible	M	W	sensible
Queen	L	F	W	dependent	F	W	somewhat dependent
D.Different	M	M	W	independent, adventurous	F	W	independent, adventurous
T.E. Thorn M.Mellow	H	F	W	domineering, dependent	F	W	domineering, somewhat dependent
Zoo Keeper	L	M	N	humdrum	M	W	humdrum
Doctor	L	F	W	somewhat dependent	F	B	calm, sensible
T.T.Howard	L	M	W	active, confident	M	B	active, donfident
Freddy F./ Juanita J.	L	M	W	typical TV host	F	H	typical TV host
Announcers	VL	M	W	nonentity	M	B	one, not 2 char.
Barker	VL	M	W	extrovert	M	H	extrovert
Guards	VL	M	W	military	M	H	military
Driver	VL	M	W	no dialogue	M	H	no dialogue
Herald	VL	M	W	clearly spoken	M	H	clearly spoken
Hi Ho	VL	M	N	flowery, verbose	M	B	articulate
Freddy	VL	M	W	grinning	M	W	smiling
Vera	VL	F	W	simpering soprano	F	W	pleasant alto
Larry	VL	M	N	fat, dirty, lazy	M	W	not illustrated
Melvin	VL	M	W	bumbling'tough guy'	M	W	bumbling'tough guy'
Susie	VL	F	W	giggly, naive	F	W	pleasant, cheerful

* Visibility:
VH = very high
H = high
M = medium
L = low
VL = very low

** Ethnicity:
W = white
B = black
H = Hispanic
N = non-white

story installments in which that character participates, and the amount of dialogue spoken. The second scale of visibility is conceptual, relating to the strength of the impact a character has on the storyline, and/or the relative importance of a program concept which is taught through the behavioral characteristics of the character. A comparative example based on the field test version should illustrate the purpose of indicating visibility.

The Queen and Daringly Different are both main characters. The former appears in 5 story installments, is illustrated in 11 of the 124 frames presented on the Storypages, and has many lines of dialogue. However, although necessary to the storyline, she keeps a very low profile and plays a subordinate role. Quantitatively she has low to medium visibility; conceptually she has low visibility, resulting in a combined rating of "low." By comparison, Daringly Different appears in 2 story installments, is illustrated in 6 of the frames, and has less than half the amount of dialogue given to the Queen. He carries total responsibility for portrayal of an important program concept, and plays a positive superordinate role. A combined rating of "medium" visibility results for this character.

Table 32 relates to human characters. All main characters, all titled but unnamed supporting characters, and named supporting characters specifically mentioned in either Section III or Section IV of Chapter Five are listed. Supporting human characters and activities characters not included in this table have been revised only in illustrations.

Table 33

Non-Human Characters Represented in Two Versions of Program Materials

Characters	Field Test Version		Revised Version	
	Sex	Behavioral Char.	Sex	Behavioral Char.
Asterisk	M	wise, professorial	M	wise, professorial
Oopser	M	logical but cries	M	does not experience feelings
A. Alligator	M	extrovert	M	extrovert
B. Bluechip	F	somewhat dependent	F	somewhat dependent
Far Out Fish	M	abrupt	M	abrupt
Lonely A Lot	F	as name	M	as name
Little Lonely	M	as name	F	as name
Mighty Glad	M	as name	M	as name
Little Glad	F	as name	F	as name
So Very Sad	F	as name	F	as name
Little Sad	F	as name	F	as name
Hopping Mad	M	as name	M	as name
Little Mad	M	as name	M	as name
Horribly Hurt	F	as name	F	as name
Little Hurt	F	as name	M	as name
Scared to Death	F	as name	F	as name
Little Scared	F	as name	F	as name

Table 33 relates to non-human characters, all of whom are listed.

Illustrations. Almost all illustrations of characters described as non-white in the Affirmative Action Report were redrawn. Many illustrations of white children, especially girls, were also redrawn. When characters were revised by changing sex or changing or identifying race or ethnicity, new illustrations were created.

III. STUDENT MATERIALS

This section contains three parts: accessories, tape presentation, and Student Journals. Although the audio tapes are not actually handled by students, they are included in this section since students are directly effected by the content and nature of the tape presentation.

Accessories

The FTV accessories are little changed in the RV. The minor changes that were made relate to cost-effective production.

Tape Presentation

There were several changes made to the tape presentation of the *Heartsmart* stories and games.

Four general revision strategies were applied to the presentations of all the lessons in the program. These are discussed below.

- The greeting, concluding statements, and standard directions given on the tapes for each lesson (e.g., students were told during each lesson that they could color the Storypages) were found annoying and unnecessary by both teachers and students after initial familiarization with the program sequence. Consequently, these statements and instructions were modified or eliminated to reduce the amount of repetition. Lesson 9 is the last time students are told that they may color the Storypages. Lesson 8 is the last time students receive full clean up directions.

- Since teachers and students found the frequent use of the words "now," "well," and "O.K." irritating, these words were almost entirely eliminated from the tape presentation. Sentences beginning with "you should" were also rephrased to sound less condescending.
- Students were vehement in expressing dissatisfaction with the voice intonations of the tape presentations, finding them too "babyish." The actors and actresses who will dramatize the tape script will be cautioned to speak in a way which is more appropriate to a fourth grade student.
- The intervals allowed for the students to respond were at times too short or too long. Two remedies were adopted. The intervals on the tapes were either shortened or lengthened appropriately, or teachers were given the option to stop or speed up the tape as necessary.

Other changes made to the tape presentation included: (1) reminding the students to supply their own answers on the Gamepages; and (2) all the modifications in directions which were necessary as a result of changes made to the Student Journals.

Student Journals

Major changes were made to the format of the FTV Student Journals. In some ways, the use of the word "journal" by the developer to describe the student pages used during each lesson is slightly misleading and needs to be clarified in order for the reader to understand the full impact of the revisions made. The FTV student "journals" consisted of unbound coloring, game and reviewpages which were distributed piecemeal at the beginning of each lesson, by the teacher in Unit I and by the group leaders in Units II and III. There was no bound "journal" per se.

The major format revision made to these journals was to combine and bind the loose student pages into a booklet which the students can keep during and after the program. The major advantage of the RV student booklets is that they greatly reduce the management tasks of the teacher, and accordingly enable smoother commencement of each lesson. Other advantages of the RV booklets include: (1) reduction of bulk of the materials and hence reduction in shipping costs and needed storage space; (2) reduction of production costs; and (3) increased student motivation by allowing for individual ownership.

A second major change made to the Student Journals (and to the program) was the deletion of the Reviewpages, and of the tape-led review which occurred in the FTV at the end of each lesson. (This revision was discussed in the section referring to the teacher's manual).

A few revisions were made to the tape-led activities, (and related Gamepages), and of those made most related to format and layout of the Gamepages. Minor content changes were made on the tape-script and/or the Gamepages for Lessons 4, 8 and 9.

One of the least popular tape-led activities was the one following

Lesson 15, a lesson focusing on "difference" in which the central character advises students not to be worried or afraid of being different if they are true to themselves and don't hurt other people. The FTV tape-led activity asked students to express feelings about the central character and to read each other's feelings. The RV activity asks students to imagine a desirable "different" activity, career, or life style for themselves in their futures, and to discuss the differences chosen within their small groups.

Accordingly to the FIRO structure, Lesson 19 relates to control. However, the FTV story for Lesson 19 related to inclusion. Changes made to the story necessitated revisions to the tape-led activity for that lesson. In the RV tape-led activity, students role-play characters on a television show in which they express desires relating to control, instead of desires relating to inclusion.

REFERENCES

Anderson, Gary J. The Assessment of Learning Environments: A Manual for the Learning Environment Inventory and the My Class Inventory. Halifax, Nova Scotia, Canada: Atlantic Institute of Education, 1973.

Barr, A.J., et al. A User's Guide to S.A.S. Raleigh, N.C.: S.A.S Institute Inc., 1976.

Berzon, Betty, Adrianne Bank, and Jeff Beane. Evaluation Report on 1974-1975 Classroom Tryout of the Heartsmart Program. Philadelphia: Research for Better Schools, Inc., 1975.

Berzon, Betty, and Jeff Beane. Evaluation Report of 1976 Pilot Test of the Heartsmart Program (Testing Interpersonal Hypotheses). Philadelphia: Research for Better Schools, Inc., 1976.

Berzon, Betty, et al. The Heartsmart Adventures Teacher's Manual (Field Test Version). Philadelphia: Research for Better Schools, Inc., 1977.

Campbell, D.T., and J.C. Stanley. "Experimental and quasi-experimental design for research in teaching," in N.L. Gage (ed.) Handbook of Research in Teaching. Chicago: Rand McNally, 1963.

Finn, J.D. Multivariance: Univariate and Multivariate Analysis of Variance, Covariance, Regression and Repeated Measures, Version VI, Release 1. Chicago: National Educational Resources, Inc., August 1977.

"Guidelines for Affirmative Action in RBS Products and Services," Philadelphia: Research for Better Schools, Inc., July 1976.

Hummel, T.J., and J.R. Sligo. "Empirical Comparison of Univariate and Multivariate Analysis of Variance Procedures," Psychological Bulletin, pp. 49-57, Vol. 76, No. 1, 1971.

Ryan, Leo Robert. Clinical Interpretation of the FIRO-B. Palo Alto, California: Consulting Psychologists Press Inc., 1970.

Schutz, William C. The Interpersonal Underworld (FIRO: A Three-Dimensional Theory of Interpersonal Behavior. Palo Alto, California: Science and Behavior Books, Inc., 1966.

Stake, R.E. "The countenance of educational evaluation," Teachers College Record, pp. 523-540, Vol. 68, 1967.

APPENDICES

APPENDIX A

PROGRAM IMPLEMENTATION AND PARENTAL CONSENT

1. Parental Consent Form
2. Information Pages

A1

XYZ SCHOOL DISTRICT
ABC ELEMENTARY SCHOOL

Dear Parent,

Next term, your child's 4th grade class will be taking a course called *The Heartsmart Adventures*. The course is described in the following pages.

Because *Heartsmart* is new and different, we are asking you to decide whether or not your child will take the course.

Please read the description carefully.

If you have any questions now or at any time during the course, feel free to call:

Jane Roberts at Research for Better Schools
561-4100 (ext. 220) or

Mr. Principal at ABC Elementary School
(Phone number given)

I have read the description of *Heartsmart Adventures*.

I agree/do not agree (Please circle one.) that my child

(Name)____ may take the

course called *Heartsmart Adventures*.

I understand that if I give my consent now, I am free to withdraw my child from the course at any time.

Signed________________________________
(Parent or Guardian)

Date________________________________

JR:nls
12-09-76

"HEARTSMART ADVENTURES"

"Heartsmart Adventures" has been developed over the last three years, with federal funds from the National Institute of Education, by Betty Berzon, a psychologist, and staff members of Research for Better Schools.

Research for Better Schools is in Philadelphia, and is one of several educational research and development institution in the U.S.

"Heartsmart Adventures" has been tried out in schools in Los Angeles. It is now being tried out in the Philadelphia area. Next year it will be offered for commercial publication.

Descriptive Overview

The "Heartsmart Adventures" course consists of 30 lessons, each designed to take about 25 minutes. Twenty-four of the lessons are based on dramatized tapes. The remaining 6 lessons are discussions led by the teacher.

The tapes tell the dramatized story of a boy named Jack who has many adventures as he finds his feelings and learns to express them. In the story, Jack learns, among other things, to understand other people and himself better.

The tapes also guide students in activities for which they use game-pages and/or other materials. (For example, in Lesson 9, each student looks at a picture while the teacher on the tape explains that the picture shows Joe pushing Billy. Each student is then asked to choose the feeling Billy might have, and underline the feeling on the list at the side of the picture. Four different situations are described and illustrated and students are asked to identify the most probable feeling of the main character in each situation. The teacher on the tape then reviews each situation explaining that the "answers" given are the most likely for most people.)

The course is divided into three units. In Unit I (the first 12 lessons), students work individually. For the rest of the course (lessons 13-30), students work in groups of six.

Detailed Outline

Below are brief descriptions of the 30 lessons in the course. An asterisk (*) is used to indicate any activity that students may find unusual, new or different.

1. Senses -- Jack goes into the world to find what he is missing. Students relate senses to experience.
2. Feelings -- Jack meets the Feelings. Students relate the feelings "sad" and "happy" to experience.
3. Verbal expression -- Jack learns to speak his feelings. Students respond to taped stimuli by stating their own feelings.
4. Listening -- Jack learns to listen to the feelings of others. Students identify feelings expressed by tones of voice on tape.
5. "Reading" -- Jack learns to "read" feelings of others expressed by facial expressions or pantomine. Students "read" illustrated feelings.
6. Heart to Heart -- The teacher leads the class in a discussion reviewing previous lessons, and encouraging students to relate concepts to personal experience.
7. Variety in expression -- Jack competes in "I've Got A Feeling." Students "read" feelings expressed by volunteers who respond to directions given by the teacher.
8. How not to make mistakes -- Jack and a robot called OOPSER (Only Original Person Scanner) help others to see how and why they may have "misread" others' feelings.

Students evaluate taped situations, identifying feelings dramatized and ways in which to check out what others feel.

9. Cause and effect -- Jack and the OOPSER help others to see how feelings can cause actions (behavior), and vice versa.
   Given a situation (taped or illustrated), students name the feeling most likely to be felt by the main character in the situation. Students respond in the same way to four different situations.

10. Cooperation -- On his way home to the palace, Jack learns to cooperate.
    Students work in groups on a class coloring project.

11. Transfer -- Jack learns that he can transfer what he has learned "out in the world" to situations at home.
    Students match learned concepts to a variety of places and situations outside school.

12. Heart-to-Heart Talk

13. How not to be lonely -- Jack helps the Droop, a lonely fantasy character, to form a group to meet and make friends.
    Students identify their color-coded groups and then discriminate between taped examples of groups sharing feelings and groups not sharing feelings.

14. Inclusion -- Jack and the Feelings decide to set up a Heartsmart School in the Palace.
    In each group, students role play a T.V. show, selecting characters from a given list of three possibilities, first reading given responses, and then improvizing.

15. Control -- Daringly Different describes his adventures and explains that each person is different in his/her own way.
    Students imagine that Daringly Different is coming to visit them, and show their feelings about this visit by facial expression. Each student "reads" the feelings of other group members. Discussion follows.

16. Affection -- On a trip to the zoo, the Feelings decide to break their usual partnerships and make friends with others as well.
    The Heartstart students play a game of pairing zoo animals in unusual ways.
    *In each group, each student chooses two other students and describes, in writing, an activity they might enjoy sharing. Group discussion follows.

17. Heart-to-Heart Talk

18. Inclusion -- Two of the Feelings run away because they are being ignored.
Students identify their own feelings stimulated by a story. They then recall occasions when they felt left out, and identify their feelings at that time.

19. Control -- The Feelings who ran away return to the palace where they proclaim a "Pay Attention To Me Day".
Students role play in a T.V. show in which they state ways in which they would like to receive more attention.

20. Affection -- Jack and the Feelings learn how to make friends.
*Each student sends a "tell-a-gram" to two other group members asking to make friends and completing the sentence, "Something you do that I really like is ..... "

21. Heart-to-Heart Talk

22. Inclusion -- The Feelings learn that everyone needs to feel important.
Students role play "Very Important People" in a radio show, giving reasons why they are important.

23. Control -- The Royal Reading Feelings Championship takes place at the palace. All the characters take part.
Students play a version of the Royal Reading Feelings game. Each student then states what he/she would like to do especially well.

24. Affection -- The students of Jack's Heartsmart School hold a graduation dance, where the King, Jack's father, finds out that he is likeable as a person.
*Each student sends a tell-a-gram to two other group members saying, "I want you to like me." Answer-grams giving positive friendly responses are returned.

25. Heart to Heart Talk

26. Inclusion -- The Feelings get pushed around by a T.V. director -- T. E. Thorn -- and decide that before they can work with Ms. Thorn they'll have to hold a Heart to Heart talk.
Each student recalls an occasion when he/she felt unimportant and states the feeling shown "on the outside."
Each student states the feeling felt "on the inside". Group discussion follows.

27. Control -- The Feelings hold a Heart-to-Heart talk with T. E. Thorn, who reveals some of her feelings.
    Each group cooperates in coloring a large picture, changing the sketch from a gloomy scene to a bright one.

28. Affection -- T. E. Thorn suffers from the "Like-mes" -- a confusion of expressed feelings, and is cured when she learns that she will still be liked if she is a little more self-controlled.
    *Each student writes a tell-a-gram to each group member stating appropriate reasons why the receiver is liked. Answer-grams are returned. Discussions follow.

29. Heart to Heart Talk

30. Conclusion -- All the characters hold a "Hello and Goodby" party.
    Students draw pictures of anything enjoyed during the program.
    Discussion follows.

Ways In Which Children May Benefit from "Heartsmart Adventures"

The course is designed to help children to:

. recognize their own feelings;

. express their feelings in words, actions, or facial expressions;

. understand that everyone has feelings;

. "read" other people's feelings by listening carefully to what others say or watching how others behave;

. understand that people often behave in certain ways because of the feelings they have;

. identify ways in which people may behave when they have certain feelings;

. identify feelings people may have that cause them to behave in certain ways;

. be able to express (by words or actions) what they want or don't want (from other children and/or adults) in the areas of affection, being included in activities, or being in charge;

During the course, children will be involved in reading, writing, class and group discussions, brief dramatizations, and projects led by the teacher.

Ways In Which Children May Feel Discomforted By "Heartsmart Adventures"

During discussions children are asked to describe their feelings or recall situations in which they experienced certain feelings.

There are two kinds of discussions.

On six occasions, the teacher leads a class discussion. Students are told that "if they want to" they may describe their feelings and behavior and the situation they experienced. If students choose to do this, they may name other people. This may cause some embarrassment to people named, and the student speaking may feel embarrased by the reaction of others in the class.

In ten of the lessons in which students work in groups, the last 3 to 5 minutes of the lesson are spent in group discussion. The teacher on the tape directs students to think about the activity just completed and to tell other members of the group their feelings about the activity. During this discussion, students may cause each other embarrassment if negative comments about others' behavior are made.

The activities following lessons 16, 20, and 24 are based on "tell-a-grams". Each student is asked to express friendship toward other group members and to describe a likeable behavior of those to whom he or she sends a tell-a-gram. In each of these three activities all students will receive at least one tell-a-gram. Some students may receive two or more. It is possible that students who receive only one tell-a-gram will experience a feeling of being left out.

Alternative Programs or Procedures

Although a variety of affective programs and activities are used in elementary schools, as far as is known, there is no program currently in use which has the same goals or is designed to achieve the same results as "Heartsmart Adventures."

"Heartsmart Adventures" Story Summary

This is a story about the Jack-of-Hearts, who lives in the Royal Palace with his mother, the Queen-of-Hearts, and his father, the King-of-Hearts. The palace is a beautiful place, but Jack is not happy there. Something is missing in his life, but he doesn't know what it is, so he decides to leave home, and go into the world to see what he is missing.

His adventures begin at once. In the Puzzles Galore Park, he meets a Far-Out-Fish who helps him come to his senses. That is, he discovers that he has senses that provide useful information about what is happening to him.

In his next adventure, Jack meets the Wise Old Asterisk, who helps people find the information they need when they have a special problem. The Wise Old Asterisk discovers that Jack doesn't know what feelings are, so he introduces him to a few. There's Mighty Glad and A Little Glad, Scared to Death and A Little Scared, Hopping Mad and A Little Mad, Lonely A Lot and A Little Lonely, Horribly Hurt and A Little Hurt, So Very Sad and A Little Sad.

These Feelings become Jack's friends, and with their help he becomes aware that he has feelings of his own. He learns to express his feelings in different ways, with and without words. He becomes more aware of the feelings of others, and how these feelings affect the way others behave toward him, and how that affects how he feels about them and behaves toward them. This helps him understand how to work cooperatively with others to get things done that can't be accomplished by people working alone.

He learns to "read" the non-verbal language of emotions (facial expressions, tone of voice, etc.) and he learns the importance of checking out other people's meanings when their messages are unclear. He becomes so proficient at all this that he is soon considered an expert, and in this role, he co-hosts a television program called "Ask the OOPSER," on which people appear to get help with their perplexing people puzzles. The COPSER is a computer (The Only Original Person Scanner) who signals interpersonal lapses and oversights when people are telling their stories by sounding out OOPS! OOPS! OOPS! OOPS! OOPS!

Of course, with all this learning about feelings and relationships, Jack's heretofore missing heart is now very much a part of him, and growing stronger everyday.

At the end of Unit I, Jack becomes homesick for his parents, and he returns to the Royal Palace with his new friends, the Feelings and the Wise Old Asterisk. His parents are very glad to see him and to learn that he's found his heart. Soon Jack realizes that the lessons he learned out in the world about feelings and relationships apply just as much at home, with his parents. That makes all the Hearts very happy.

Back home, in the Kingdom of the Hearts, Jack discovers that there are others who have not yet found their hearts. With the help of his father, the King, he begins the Heart Start School where he and his friends teach the lessons of the heart that he learned in his adventures in the world. At the school, the students learn about making friends, about cooperation and sharing leadership, asking for the attention they need, expressing their individuality, being aware of the feelings of others, being supportive and responsive to others.

They learn that it's all right to want to belong to a group, or not to want to. They learn that everyone wants to be important to others, that people like to be in charge sometimes, but not other times, and some people don't like to be in charge at all, which is just fine. They learn that it's O.K. to want to be good at some things, and to want to be liked by others. And, they learn how to let people know what they want in ways that are likely to have successful outcomes.

Some very interesting people come to the Heart Start School, like Fast-Talking Howard of the Royal Television Network, who comes to broadcast the opening of the school, and the Royal Reading Feelings Championship Games that are held during graduation weekend between the Heart Start Students and the Royal Heart Marines.

There's the world-famous adventurer, Daringly Different, who tells about learning that it was O.K. to be different from others, and feeling so strong as a result that he began to do the daring things that made him world-famous.

Unusual things happen, like the time the Hurts go underground because they aren't getting enough attention. Down, down, down they they go to the subterranean passages of the Royal Palace where they meet the Altogether Alligator, who takes them to a meeting of the Speak Easy Club, where you can learn to speak easy about yourself. There they hear Ms. Bessie Bluechip sing a song: "If you're feeling left out, don't just sit and stew. Tell me what you want, c'mon speak up about you!" That is an important learning experience for the Hurts who go back up above ground to get the King to proclaim a "Pay Attention to Me Day," on which the Hurts pass on Ms. Bluechip's message to every one in the Kingdom of the Hearts.

Then there is graduation weekend, with the Royal Reading Feelings Games and the Crystal Ball, where the Queen gives out the Glass Heart Awards to the Heart Start Students who have learned best how to express themselves in different ways.

Now the school has become so famous that the Barbarian Broadcasting Company has sent their best director, Ms. Thistle E. Thorn, with a crew, to film a television special on the Heart Start School. The great excitement about that is dampened by Thistle E.'s very prickly manner. She pushes the Little Feelings out of the way ("It's big news we're after!") and miscasts the Big Feelings, until everyone is angry with her. In line with the policy of the school, they call a Heart-to-Heart Talk with her to let her know how they feel about what is happening. To show her that they know best what they can do, they put on a show for her, in which they confront her with herself as they see her. This affects Thistle E., who breaks down and tells them her real name is Marsha Mellow and that she is really a softie inside. They like her much better then, and all cooperate to put on a terrific television special.

At the end of the school year, the Heart Starters have a hello and goodbye party: goodbye because they're leaving each other, hello because they're going to do new things and meet new people. Jack sings a song at the party, which ends with

> So follow your own path,
> and follow it true.
> You'll find something super;
> that someone is you.

APPENDIX B

TEACHER TRAINING

1. Teacher Training Session Agenda
2. Teacher Training Session Evaluation Results

TEACHER TRAINING SESSION

AGENDA

December 16, 1976

9 a.m. — 4 a.m.

Introduction. Participants introduce themselves.

Program Rationale. Developer (Betty Berzon) introduces concepts; participants role play program activities related to concepts. Developer explains and illustrates goals by referring to the Teacher's Manual.

Program Development History. Developer explains.

Program Organization and Materials. Developer explains; participants refer to relevant sections of the Teacher's Manual and to materials.

Lesson 14. Participants form groups and role play the tape-led activity for Lesson 14. Discussion follows.

Lunch.

Group Formation and Leadership. Developer explains; participants refer to the Teacher's Manual.

Trouble Shooting. Participants refer to the Teacher's Manual; developer answers questions about potential problems.

Heart to Heart Talks. Developer explains and involves participants in role playing a Heart to Heart talk.

General Guidelines. Developer makes specific suggestions relating to program implementation and answers questions posed by participants.

Training Session Evaluation. Participants respond to evaluation questionnaire.

B2

HEARTSMART TRAINING IN RETROSPECT

Directions:

Follow the individual directions given for each question. Feel free to add your own comments on the back.

1. Did the training provide you with a good understanding of the Heartsmart Program?
   Indicate whether the training you received on each of the following topics was or was not sufficient. (*check one for each topic*)

Topics	insufficient	sufficient
a. Goals and concepts of Heartsmart		11
b. Content and organization of the program		11
c. Procedure for conducting the lessons		11
d. Procedure for organizing small groups and leading small group discussions	1	10
e. Procedure for Heart to Heart talks	2	9
f. Anticipating and dealing with potential problems		11

2. Are there any topics or experiences that should be added to the training program? (*circle one*) YES 6 NO 5

   If yes, please specify and explain

   see attached

3. Are there any topics or experiences that should be eliminated from the training program? (*circle one*) YES 1 NO 9

   If yes, please specify and explain

4. Are there any topics or experiences that should receive more emphasis? (*circle one*) YES 2 NO 7

   If yes, please list (the topics) using the key letters from question #1.

   TOPICS OR EXPERIENCES TO BE EMPHASIZED

   1)

   2)

   3)

   see attched

5. How well did the training prepare you to deal with specific problems? Indicate how confident you feel in your ability to handle the following problems should they arise. *(circle one each group)*

Problems	not confident		fairly confident		confident
a. students being noisy or disruptive	1	2	3(1)	4(1)	5(9)
b. unusual behavior(s) of students	1	2	3(2)	4(4)	5(5)
c. lack of motivation of students	1	2	3(2)	4(5)	5(4)
d. difficulty with tape because of readability level	1	2	3(1)	4(5)	5(5)
e. peer rejection or criticism among students	1	2	3(4)	4(6)	5(1)
f. potentially embarrassing situations/ discussions (for Ss)	1	2	3(2)	4(8)	5(1)
g. negative comments from parents	1	2	3(3)	4(4)	5(3)
h. personal uneasiness, if any, with Heartsmart concepts (on your part)	1	2	3(2)	4(4)	5(5)

6. Did you have enough opportunity to practice your roles in implementing the Heartsmart Program? *(circle one)* YES 7 *NO 3

If no, please explain see attached

7. How helpful did you find the different parts of the training?

	not helpful		fairly helpful		very helpful
_____discussing background and development	1	2	3(2)	4(2)	5(7)
_____listening to tape/completing game pages	1	2	3(1)	4(1)	5(9)
_____discussing problem areas	1	2	3(3)	4(1)	5(7)
_____role-playing for Heart to Heart talks	1	2	3(4)	4(1)	5(5)
_____role-playing for parental concerns	1	2(2)	3(1)	4(3)	5(5)
_____teacher quiz	1	2	3	4	5
_____what if ... sequence	1	2	3	4	5

not
cov
trai
sessio

8. How confident to you feel about your role for each of the following? *(circle one)*

	not confident		fairly confident	confident	
story activities	1	2	3 (1)	4 (1)	5 (9)
tape-led excercises	1	2	3	4 (3)	5 (8)
Heart to Heart talks	1 (1)	2	3 (2)	4 (2)	5 (6)
optional activities	1 (1)	2	3 (1)	4 (2)	5 (7)

9. How much did your interest in Heartsmart increase or decrease as a result of the training sessions? *(circle one)*

1	2 (1)	3 (5)	4 (1)	5 (4)
decreased a great deal		remained the same		increased a great deal

10. What was most and least interesting and/or enjoyable to you about the Heartsmart training session?

Most: see attached

Least: see attached

11. Was enough time devoted to answering your particular questions, *i.e.* addressing your particular concerns?

YES 11

NO *(please explain)*

see attached

12. If it were optional, would you attend this type of training in the future?

YES 10

NO *(please explain)* ______________________

see attached

13. Any further comments?

On the Heartsmart program: ______________________

see attached

On the Heartsmart training session: ______________________

HEARTSMART TRAINING IN RETROSPECT
SUMMARY OF COMMENTS

2. Are there any topics or experiences that should be added to the training program?

   YES, but I would need more time to think about specifics.

   Maybe a time line — when to start and rough dates for lessons.

   More activity type experiences rather than lecture on manual.

   Seeing a film or slides of an actual lesson would have been beneficial.

   Film or filmstrip or tape of groups in action. Ongoing training sessions after completing a portion or portions of the program.

   Added meeting later to interact with these same workshop people regarding experiences encountered.

3. Are there any topics or experiences that should be eliminated from the training program?

   Can a child deal with a heart-to-heart talk that bares his failures without offering a solution?

   Introduce each other. Role playing.

4. Are there any topics or experiences that should receive more emphasis?

   1) Conceptual Framework, 2) Some background reading for teachers, 3) A training program for the admin. of the schools where used.

   1) More positive experiences and awarenesses.

6. Did you have enough opportunity to practice your roles in implementing the Heartsmart Program?

   Needed more workshop type activities like the "TV" activity to practice teacher directed lessons.

   More hands on activities.

   Not possible to conduct an actual lesson.

COMMENTS CONT.

10. What was most and least interesting and/or enjoyable to you about the Heartsmart training session?

Most: Knowing something about the theoretical base upon which this program is built.

Most: Discussion of actual course of study.

Most: Practical application, sharing ideas, being aware of problems, supportive attitude present.

Most: Hands on activities.

Most: Participating in the activity.

Most: The teacher discussions were most interesting. Also, hearing precise information about program was indeed helpful.

Most: Going thru a lesson. Learning objectives.

Most: Actual work with tape and materials.

Most: Activities where we were involved.

Most: Actually using the materials and hearing the tapes.

Most: Role playing a taped lesson.

Most: Theoretical background.

Least: "Quickie" walkthrough of teacher-guide.

Least: Too much lecture.

Least: When we had to listen to what we've already read in the book.

Least: The day was much too long for me. Two-thirty was a good time to stop.

Least: Role playing projected problems.

Least: Session dragged. More involvement needed. Could have been done in less time.

Least: Length of time of the day (this may not be changeable but I found the color of the walls in the room very distracting and irritating to sit in for a long period of time).

Least: Specific situations/problems. H-H simulation.

12. If it were optional, would you attend this type of training in the future?

YES, but only if more concise.

YES, if I was involved in piloting a program or in the study like this time.

YES, assuming the program was effective based on field test experiences and results.

COMMENTS CONT.

13. Any further comments?

On the Heartsmart program:

As the evaluator, I'm still unclear as to the overriding goal of the program.

Good idea but I seriously doubt very much if our district would ever put out the money to buy it!

Seems to be an area of need of our youth — am anxious to begin; glad that resource people will be available for problems, suggestions, etc.

Looking forward to seeing if this program can make children more aware of themselves & their emotions.

I'd like to meet again when the program is well underway. I'd like to talk with the other teachers involved.

The goals of program are important.

Booklet well-organized and clear.

I am anxious to get more involved with the program and its activities.

On the Heartsmart training session:

I think the presenter was very knowledgeable but seemed to cover a lot too quickly.

Instead of just lecture, perhaps a film, filmstrip and/or slides could be used to show examples of the group discussions, Heart-to-heart talks, etc. Have another session for feedback and results.

Too long for what we did.

It was too long.

Maybe two morning sessions instead of one day — teachers tend to "droop" in the afternoon.

Enjoyable but long day.

Good — sharing session, cleared up many points — my questions were answered, got to know people related to program — stimulating. Would find it most beneficial and interesting if we could all meet again at the end of the program to discuss results.

I think it would be beneficial to you and ourselves to meet again at the completion of the program.

Too long — but sufficiently interesting to maintain my attention.

APPENDIX C

EVALUATION MEASURES

1. a) Teacher's Opinion Surveys and Records - Directions
   b) Teacher Data
   c) Course Schedule
   d) Form 1 - Lessons
   e) Form 2 - Heart to Heart Talks
   f) Form 3 - Program Units
   g) Form 4 - Total Course

2. a) Student Attendance - Directions
   b) Student Attendance - Record Sheet

3. a) Student Opinion Surveys - Directions
   b) Survey A - Tape-led Lessons
   c) Survey B - Heart to Heart Talks
   d) Survey C - Groups

4. a) Observation forms and questions for Tape-Led Lessons
   b) Observation questions for Heart to Heart Talks.

5. Student Interview form.

6. Teacher Interview form.

7. a) What Would You Do? Test
   b) What Would You Do? - Scoring Key
   c) What's Happening? Test
   d) What's Happening? - Scoring Key

8. a) My Class Inventory (3 scales) Measure
   b) FIRO-BC (modified from published version) Measure

Teacher's Opinion Surveys
and Records

Teacher Data page.	Please respond BEFORE reading the Teacher's Manual.
Course Schedule.	Please keep this record up-to-date.

There are 4 different survey forms, all designed to collect information so that the developers of this course will be able to use your experience and judgment in determining desirable revisions.

Please respond to the appropriate survey as soon as possible after teaching a lesson or unit.

Form 1.	There are 24 copies of this survey form, one to be completed after each lesson.
Form 2.	There are 6 copies of this survey form, one to be completed after each heart-to-heart talk.
Form 3.	There are 3 copies of this survey form, one to be completed after each unit.
Form 4.	There is 1 copy of this survey form, to be completed at the end of the course.

* If you choose a starred (*) response to any question, please explain.

Clb

Teacher Data

Please respond to this questionnaire ***before*** *you study the course materials.*

A. In this school:

1. I teach grades ____________________
2. The average number of students per class that I teach is __________
3. The main subject I teach is ____________________________________
4. Other subjects I teach are ____________________________________

   ____

B. Background:

5. My major(s) in college (other than education) ____________________

   ____

6. I have taught for ______ years.
7. I have taught grades ____________________________________
8. Most of my experience has been with _____ grade(s), in the subject areas ____________________________________

C. General:

9. I wish I could educate children (so they could ....)

   a. ____

   b. ____

   c. ____

Course Schedule Clc

As soon as possible after each lesson, please complete this log.

Lesson	Date	Optional Activity (Give number(s) of activity used, or write "none" or "my own")	Date optional activity taught, if different from lesson date	Time taken for optional activity
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

Cld

Lesson # ____

Teacher's Opinion Survey Form #1 -- Lessons

Circle the appropriate number or response(s) and comment where necessary.

1. How difficult were the materials to distribute and collect? *(Circle one.)*

1	2	3	4
very difficult	difficult	easy	very easy

2. How would you rate the taped story for this lesson with respect to the following? *(Circle one for each quality.)*

	Qualities	Very poor	Poor	So-So	Good	Very Good
a.	volume (loudness)	1	2	3	4	5
b.	pace/speed	1	2	3	4	5
c.	conceptual clarity	1	2	3	4	5
d.	appeal of characters	1	2	3	4	5
e.	appeal of plot/storyline	1	2	3	4	5
f.	overall quality	1	2	3	4	5

3. How would you evaluate the directions given for the taped game? *(Circle one.)*

1	2	3	4
very confusing	confusing	clear	very clear

4. How important are the concepts of today's lesson for your students? *(Circle one.)*

1	2	3	4	5
not important	a little important	fairly important	very important	extremely important

5. Was today's taped game relevant to the lesson's objectives? *(Circle one.)*

Yes No

6. Did you use an optional activity as given in the teacher's manual? *(Circle one.)*

Yes No

IF YES, ANSWER QUESTIONS 6a. AND 6b. IF NO, GO ON TO QUESTION 7.

a. Why did you choose to use it? *(Circle all that apply.)*

I liked it.	I thought Ss would like it.	It reinforced lesson objectives.	It reinforced course objectives.	*Other

*Please explain ______________________________

b. Was it easy to teach? *(Circle one.)*

Yes *No

*Please explain ______________________________

ANSWER THIS QUESTION ONLY IF YOU ANSWERED "NO" FOR QUESTION 6.

7. Why did you choose not to use an optional activity? *(Circle all that apply.)*

No time available	Unappealing to me and/or to students	Did not reinforce objectives	*Made up my own	*Other

*Please explain ______________________________

8. If anything out of the ordinary (good or bad) happened during today's lesson, please describe. Also, feel free to make any suggestions for improvement, or comments relevant to today's lesson.

Cle

Lesson # ______

Time taken ________

Teacher's Opinion Survey Form #2 -- Heart-to-Heart Talks

Circle the appropriate number or response and comment where necessary.

1. How easy was it for you to present the "main points" and "questions" for today's lesson? *(Circle one.)*

   *difficult   *fairly difficult   fairly easy   easy

   *Please explain ______________________________

2. How did you feel about the concepts of the Heart-to-Heart Talk? *(Circle one.)*

   Unenthusiastic   Enthusiastic

3. How much feedback did you offer students? *(Circle one.)*

   very little   a little   some   quite a lot

4a. Approximately what percent of the class responded to your questions? *(Circle one.)*

   0-20%   21-41%   41-60%   61-80%   81-100%

 b. To what do you attribute this amount of response? ______________________________

   ____

5. In general, how (with what attitude) did your students offer responses? *(Circle one.)*

   reluctantly   fairly willingly   eagerly   *other

   *Please explain ______________________________

6. How well did the students attend to each other's comments? *(Circle one.)*

   poorly   not very well   well   very well   *other

   *Please explain ______________________________

7. Was there much negative peer reaction (e.g. teasing, taunting, laughing inappropriately)? *(Circle one.)*

*Yes No

*Please explain ______________________________

____

8. What was your overall opinion of today's Heart-to-Heart Talk? *(Circle one.)*

*Not worthwhile fairly worthwhile very worthwhile

*Please explain ______________________________

____

9. Please describe anything out of the ordinary that happened during today's lesson, and/or to make additional comments or suggestions.

Clf

Unit _____

Teacher's Opinion Survey Form #3 -- Units

Circle the appropriate response(s) and/or comment.

1a. Excluding the Heart-to-Heart Talks, the 2 best story installments were (in order of preference):

(1) Lesson # _____ (2) Lesson # _____

b. I selected the installment ranked first because: *(Circle all that apply.)*

it was clear and easy to understand	the content seemed relevant/ important	the story/ plot was enjoyable	S's reactions were positive	*other

*Please explain _______________

2a. Excluding the Heart-to-Heart Talks, the 2 worst story installments *(note the worst first)* were:

(1) Lesson # _____ (2) Lesson # _____

b. I selected the installment ranked worst because: *(Circle all that apply.)*

it was difficult to understand	the content seemed irrelevant	the story/ plot was not enjoyable	S's reactions were negative	*other

*Please explain _______________

3. The tape-led game I liked best related to gamepage # _____ following Lesson # _____ because it: *(Circle all that apply.)*

appealed to the Ss	was well timed	reinforced course objectives	required Ss to apply desirable skills	*other

*Please explain _______________

4. The tape-led game I liked least related to gamepage #_____ following Lesson #_____ because it: *(Circle all that apply.)*

did not appeal to Ss
was badly timed
did not reinforce course objectives
required skills Ss do not have
*other

*Please explain ______________________________

5a. The most successful optional activity that I taught was: *(Fill in and circle one.)*

_____ following Lesson # _____

my own following Lesson # _____

b. It was successful because: *(Circle all that apply.)*

it motivated Ss well
it clarified concepts
it was the most creative
it was easy to teach
*other

*Please explain ______________________________

6. Please comment on any part of this unit in any way you wish. You may want to consider: timing, administration, student materials, teacher's manual, etc.

____

____

____

Teacher's Opinion Survey Form #4 -- Total Course

1. *Circle one number for each component for each dimension.*

a. Enjoyment of the students

	very little	a little	some	quite a lot	a great deal
.story installments	1	2	3	4	5
.tape-led games	1	2	3	4	5
.Heart-to-Heart Talks	1	2	3	4	5
.Optional activities	1	2	3	4	5

b. Ease of administration

	very difficult	difficult	easy	very easy
.story installments	1	2	3	4
.tape-led games	1	2	3	4
.Heart-to-Heart Talks	1	2	3	4
.Optional activities	1	2	3	4

c. Relevance to course objectives

	very little	a little	some	quite a lot	a great deal
.story installments	1	2	3	4	5
.tape-led games	1	2	3	4	5
.Heart-to-Heart Talks	1	2	3	4	5
.Optional activities	1	2	3	4	5

2. *Comment briefly for each question.*

a. How important are the course goals (see pages 1-2 in the teacher's manual) to elementary education?

b. How important are the course goals to personal development?

c. In general, how well did the course achieve its goals?

d. In what ways, if any, do you think the course produced changes in out-of-school behavior?

e. Describe any examples you know of students using Heartsmart Program-related ideas, vocabulary or activities on their own:

f. Describe anything unexpected that has happened with any of your students recently that you think might be related to the Heartsmart Program:

3. *Write in the information requested and/or circle the appropriate response.*

a. If this course were to be commercially published, I would hope that it be: *(Circle one)*

used only with 4th graders

used with grade(s) *(indicate grade(s))*____________________

used only with those Ss who *(please describe)*____________________

____

b. If I were asked to teach this course again, my strongest negative reaction would be______________________________

____

c. If I were asked to teach this course again, my strongest negative reaction would be______________________________

____

d. I would/would not *(Circle one)* recommend this course to my colleagues because ______________________________

____

4. *Circle the appropriate response and comment where necessary.*

a. How difficult were the materials to:

	very difficult	difficult	easy	very easy
prepare	1	2	3	4
collect/put away	1	2	3	4
store	1	2	3	4

b. In comparison to other courses, does "Heartsmart" require more teacher preparation time? Please do not consider field test record keeping, etc., as preparation. *(Circle one)*

*Yes No

*Please explain ______________________________

c. Did you encounter many procedural difficulties with "Heartsmart" (e.g. group formation, seating arrangements)? *(Circle one)*

*Yes No

*Please explain ______________________________

5. *Circle the appropriate response and/or comment.*

a. How well did the teacher's manual instruct or guide you in administering the course and materials? *(Circle one)*

*not very well adequately well very well

*Please explain ______________________________

b. Was the teacher's manual organized in such a way as to facilitate your understanding and implementation of the course? *(Circle one)*

Yes *No

*Please explain ______________________________

c. If given ditto masters for "Heartsmart" student materials, would you be willing and/or able to reproduce them for distribution to your students? *(Circle one.)*

Yes No

6. What I liked best about this course was ______________________________

____

____

7. What I didn't like about this course was ______________________________

____

____

C2a

Student Attendance

1. List students' names.

2. At the end of each Lesson:

   - Check (✓) the 5 students who responded to an opinion survey.
   - Note "A" in the appropriate Lesson column for each student absent.

3. Before the next Lesson:

   If students have made up the work for the previous Lesson, (e.g. by listening to the tape and using the student materials by themselves in "free" time) circle the A Ⓐ previously noted.

C2b

STUDENT ATTENDANCE

____________ SCHOOL # ______________

NAME	LESSONS														

Student Opinion Surveys

The student opinion surveys are intended to measure student reaction to the Heartsmart lessons.

Survey A relates only to the tape-led lessons and is to be administered after the completion of the taped game.

Survey B relates only to the Heart-to-Heart talks and is to be administered at the end of the discussion period.

Data from both surveys will be used to make changes in the Heartsmart materials.

Not all students will be asked to fill out forms after each lesson. Instructions for selecting students to fill out the survey forms are given below.

Directions for Administering Surveys

1. Divide the class into groups of five, taking the first five students on the class register as Group 1, the next five students as Group 2, and so on.

2. Immediately after Lesson 1, give copies of Survey A to the students in Group 1. Explain as follows:

   > *The people who developed this program would like to know what you think of it. Your opinion will help them to improve the program. Please answer the questions honestly. THIS IS NOT A TEST.*
   >
   > *Look at the survey. Make sure you understand the questions. For the last question, you may write anything that you want to say.*
   >
   > *Notice that the first two questions are about the story. The last three questions are about the game (activity) -- the things you did right after the story finished.*

3. When the students have responded, collect the surveys. Please fill in the lesson number, the date, and your school code number. File these completed surveys in the back of this record book.

4. Follow the same procedures for each tape-led lesson, rotating the groups of students who respond to the survey.

5. After a Heart-to-Heart talk, the procedure is the same using Survey B. Group 1 is asked to fill out Survey B after the first talk, Group 2 after the second talk, etc.

   After the last Heart-to-Heart talk -- Lesson 29, ask all the students to respond to Survey B.

6. Some copies of both surveys are included in this record book. Additional copies will be delivered to you by the RBS observer.

C3b

STUDENT OPINION SURVEY A
TAPE-LED LESSONS

Lesson # __________

Date: ______________________________

Code: ______________

1. How much did you like the story today? *CHECK ONE*

   ☐ A lot ☐ Some ☐ A little ☐ Not at all

2. When you were listening to the story, what was your strongest feeling? *CHECK ONE OR write in the space.*

   ☐ Happy ☐ Sad ☐ Mad Other __________________________

WHEN THE STORY ENDED, THE TAPE TOLD YOU HOW TO USE THE GAME PAGE. THINK ABOUT WHAT YOU DID TODAY.

3. How much did you like the game today? *CHECK ONE*

   ☐ A lot ☐ Some ☐ A little ☐ Not at all

4. What did you think about the game? *CHECK ONE*

   ☐ It was fun ☐ It was not fun

5. Was the game easy or hard? *CHECK ONE*

   ☐ It was easy ☐ It was hard

6. Use this space to write anything you want to say about the game today.

   ____

   ____

   ____

STUDENT OPINION SURVEY B

HEART TO HEART TALKS

Lesson # ________

Date: ______________________

Code: __________

1. How much did you like the heart to heart talk? *CHECK ONE*

☐ A lot ☐ Some ☐ A little ☐ Not at all

2. How much did you say? *CHECK ONE*

☐ A lot ☐ A little ☐ Nothing

3. Did you want to talk more? *CHECK ONE*

☐ No ☐ Yes, a little ☐ Yes, a lot

4. How interesting were the things the class talked about? *CHECK ONE*

☐ Very interesting ☐ A little interesting ☐ Not too interesting ☐ Not at all interesting

5. What was the strongest feeling you had during the talk? *CHECK ONE* *OR write in the space.*

☐ I was happy

☐ I was mad

☐ I felt like laughing

☐ I was sad

☐ I was shy

☐ I felt embarrassed

Other ________________________

6. Use this space to write anything you want to say about this heart to heart talk.

- -

- -

STUDENT OPINION SURVEY C

(Groups)

Code C3d

Put a "✓" in the box to show which is your answer.

1. Were you ever a leader? ?*(Check one.)*

   _ yes _ no

If you put a "✓" in the (yes) box answer questions 2 and 3.
If you put a "✓" in the (no) box answer question 4.

2. How much did you like being leader? *(Check one.)*

   _ not at all _ some _ a lot

3. Which was more fun -- being a leader or being a regular looper? *(Check one.)*

   _ It was more fun being a leader.

   _ It was more fun being a regular looper.

4. Would you have liked to have been leader? *(Check one.)*

   _ yes _ no

Everyone answer the next four questions.

5. How much did you like working by yourself? *(Check one.)*

   _ not at all _ some _ a lot

6. How much did you like working in the "looper group"? *(Check one.)*

   _ not at all _ some _ a lot

Answer questions 7 and 8 by writing in your thoughts.

7. What was the thing you liked best about your looper group?

   ____

8. What was the thing you really disliked about your looper group?

   ____

C4a

HEARTSMART OBSERVATION
(Lesson)

OBSERVER: ____________________

DATE: ____________________

DAY: ____________________

SCHOOL: ____________________

LESSON #: ____________________

PART I: CLASSROOM DATA

NO. OF PUPILS ______

NO./TYPE VISITORS:

☐ Parents_____ ☐ School Staff_____ ☐ Other: _____

TEACHER: ☐ Regular ☐ Substitute

ROOM ARRANGEMENT(e.g. seating pattern, direction P's face, T's desk, doors, special objects, etc.)

Note important changes during lesson period:

PART II: LOG (Continued)

SEGMENT OBSERVATION

Activities (Start____)

Review (Start____)

Wrap-up (Start____)

FINISH______

PART II: OBSERVATION LOG

C4a

SEGMENT	OBSERVATION
Begin.(Start_____)	
Tape intro.(Start_____)	
Story (Start_____)	

C4a

TIH Tape-led Lessons
Observation Questions

1. Were all materials prepared/set up/distributed for effective presentation of the lesson? YES NO NA

2. Where directed (manual or tape) did the teacher give additional instructions to the students in a timely and effective manner? YES NO NA

3. Did the teacher, on her own iniative, give additional instructions to the students in a timely and effective manner? YES NO NA

4. a. Did the teacher circulate among the students?
   b. Did the teacher provide reinforcement/encouragement? YES NO NA

5. Did the teacher use other materials/activities to supplement the lesson? YES NO

6. Did most students adequately demonstrate understanding of the taped directions? YES NO NA

7. Did most students appear to enjoy the lesson? YES NO NA

8. Did any student(s) act or speak to another student or students in a way that was not directly called for by the lesson, but which could be attributed to the lesson? (e.g. hostility, empathy) YES NO NA

9. Did any student (not in interaction with others) exhibit strong feelings (e.g. discomfort, delight) not directly called for, but which could be attributed to the lesson? YES NO NA

10. Was your overall reaction to the lesson favorable? YES NO NA

11. Were there any major problems with materials (including the tape)? YES NO NA

12. Did the teacher volunteer comments/anecdotes related to recent lessons which were not observed? YES NO NA

13. Do you have recommendations for revisions to this lesson? (Please justify where possible.) YES NO NA

JR:nls
1-11-77

"HEARTSMART" OBSERVATION QUESTIONS
(Heart-to-Heart Talk)

TEACHER BEHAVIOR

1. In introducing the lesson did the teacher mention the "rules for good discussion?" YES NO COMMENT:

2. In introducing the lesson did the teacher talk about the meaning and importance of "good listening" during a H-H talk? YES NO COMMENT:

3. Did the teacher explain beforehand what students were supposed to do during a H-H talk? YES NO COMMENT:

4. Did the teacher tell students beforehand about what feelings they might have during a H-H talk? YES NO COMMENT:

5. Did the teacher attempt to integrate previous lessons with this H-H talk? YES NO COMMENT:

6. Did the teacher mention beforehand possible difficulties that students might have in talking about their feelings? YES NO COMMENT:

7. Did the teacher reinforce students' participation by repeating what students said or by reflecting their feelings? YES NO COMMENT

8. Did the teacher share his/her own personal experience? YES NO COMMENT:

9. Did the teacher make all the main points and ask all the questions on the "H-H Main Points and Questions Page?" YES NO COMMENT:

10. Did the teacher ask students new and different questions not listed on the "H-H Main Points and Questions Page?" YES NO COMMENT:

STUDENT BEHAVIOR

1. Was verbal interaction among students during the H-H talk relevant to the questions posed by the teacher? YES NO COMMENT:

2. Did the students talk about their in-class peer relationships? YES NO COMMENT:

3. Did students talk about their peer relationships (in-class or out-of-class) in a variety of situations? YES NO COMMENT:

4. Did any students show affirmative/positive feelings toward other members of the group? YES NO COMMENT:

5. Did any students show angry or strongly negative feelings toward other members of the group? YES NO COMMENT:

6. Did any students behave in ways which might suggest they were harmed by the H-H talk experience (e.g. crying, hitting, "escape")? YES NO COMMENT:

7. Was there any evidence of overt (non-verbal) expression of feeling toward members of the group (e.g. facial expressions, gesturing, physical contact)? YES NO COMMENT:

8. Did a majority of students participate (verbalize) during the H-H talk? YES NO COMMENT:

9. Was most student talk directed toward the teacher? YES NO COMMENT:

10. Was most student talk directed toward the group as a whole? YES NO COMMENT:

11. Was most student talk directed toward individual members of the group? YES NO COMMENT:

STUDENT OUTCOMES/CLASSROOM CLIMATE

1. Did students appear to enjoy the H-H talk? YES NO COMMENT:

2. Did students relate their own personal experiences to what they were learning from the "Heartsmart" program? YES NO COMMENT:

3. Did the class seem tense or uncomfortable during the H-H talk (e.g. no smiling, no movement, long silences, fidgeting in seats, aggressive behavior, crying, etc)? YES NO COMMENT:

4. Were there any interpersonal conflicts (between students) which did not get resolved by the end of the class period? YES NO COMMENT:

TIH STUDENT INTERVIEW

1. Think about Jack and his adventures, and the things he learned. What did you learn from "Heartsmart"?

2. Do you tell your friends or parents or teachers your feelings more often now than you did before "Heartsmart"?

☐ YES (Go to 2A)

☐ NO (Go to 3)

2A. Tell me something about the feelings you show. What kinds of feelings do you show or tell about now?

(Go to 2B)

2B. Where do you show or tell your feelings now, that is, in what kinds of situations or places?

(Go to 2C)

2C. Would you tell me about one time or place that you showed your feelings?

☐ YES (Record response):

☐ NO (Go to 3)

3. Are you telling or showing your feelings fewer times now than before "Heartsmart" began?

☐ YES (Go to 3A)

☐ NO (Go to 4)

3A. Tell me something about the feelings you don't show. What kinds of feelings don't you show now?

(Go to 3B)

3B. Where don't you show your feelings, that is, in what kinds of situations or places do you not show your feelings?

(Go to 3C)

3C. Can you tell me why?

Yes...

No (Go to 4.)

(Go to 4)

4. Do you think the children in your class have changed since "Heartsmart" began?

☐ YES (Go to 4A)

☐ NO (Go to 5)

4A. Tell me how they've changed.

(Go to 4B)

4B. Do you like the way the class is now, or did you like it better before "Heartsmart" began?

☐ Now (Go to 4c)

☐ Before (Go to 4c)

4C. Would you like to give me an example to explain?

☐ YES (Record response):

☐ NO (Go to 5)

5. When you show your feelings now, does it usually help you?

☐ YES (Go to 5A)

☐ NO (Go to 5C)

5A. How does it help you?

(Go to 5B)

5B. Would you tell me about a time when showing your feelings has helped you?

☐ YES (Record response):

☐ NO

(Go to 6)

5C. Would you tell me how showing your feelings has not helped you?

(Go to 6)

6. Would you like to say anything else about "Heartsmart," or do you have any questions you would like to ask?

Record questions:

Record Ss' statements:

Terminate Interview

School______________ C6

Code________________

TIH TEACHER INTERVIEW

A. Reactions of others to Heartsmart.

1. Did you send the consent forms and information home with the children OR did you hand these materials to the parents yourself?

☐ sent home with children (go to 1a)

☐ handed directly to parents (go to 1c)

1a. Did any parents contact you before signing the consent form?

☐ Yes What were their concerns? How did you address these concerns? (go to 1b)

☐ No (go to 1b)

1b. Did you contact any parents before or after they signed the form?

☐ Yes How many? What were your reasons for doing this? What types of questions/concerns did they have? How did you respond? (go to 2)

☐ No (go to 2)

1c Were the consent forms and information handed to the parents as a group (eg, after a PTO meeting) or individually? (go to 1d)

1d What if any, questions or concerns did they have? How did you respond? (go to 2)

2. Did any parents refuse consent?

   ☐ Yes How many? What were their reasons for refusing? (go to 3)

   ☐ No (go to 3)

3. Of the parents who gave their consent, did any later wish to withdraw their child from the course?

   ☐ Yes What were their reasons for wanting to withdraw the child. How did you react or respond? Did the parents change their minds or was the child withdrawn? (go to 4)

☐ No (go to 4)

4. Did you invite parents to observe lessons?

   ☐ Yes What kind of response did you get to the invitation? If any parents did observe, what was their reaction(s)? (go to 5)

   ☐ No (go to 5)

5. Did you "report back" (or are you planning to "report back") to parents at the end of the course?

   ☐ Yes (Ask for informal explanation.) (go to 6)

☐ No (go to 6)

6. Have you discussed the program with the other teachers in your school? (Ask for informal explanation.)

☐ Yes (go to 7)

☐ No (go to 7)

7. Did you discuss the program with anyone else? (Ask for informal explanation.)

☐ Yes (go to 8)

☐ No (go to 8)

8. Did you show program materials to other teachers, friends, or colleagues?

☐ Yes Which materials? Any of those used for the optional activities?
What were their reactions?
(go to B-9)

☐ No (go to B-#9)

B. Experiences with other Programs.

9. Have you used or heard about other programs that are similar in content and/or objectives to Heartsmart?

☐ Yes What are they?
How have they compared to Heartsmart?
(Probe: In terms of - appeal, style, target group, materials, administration, effectiveness). (go to 10)

☐ No (go to 10)

10. What future do you see for the Heartsmart materials?
(Your district...others?)
Probes: How should the program be used?
How should it be integrated into the existing curriculum?
Do you feel that the program is important enough to justify taking away time from other subjects? (go to 11)

11. How effective or ineffective did you find the format of the Heartsmart program? (i.e. tapes, storybook pages to color, group folders etc.) How pleased were you with the format? (go to 11a)

11a. Was the organization and content of the Teachers Manual to your liking?

☐ Yes What did you like best about the manual? (go to 11b)

☐ No Please describe any changes that would make the organization or content of the manual more to your liking. (go to 11b)

11b. Which parts of the program (with respect to format) seemed important, and which seemed superfluous (go to 11a)

11c. Do you have any suggestions for ways the program could be packaged so it would be less bulky or easier to administer or less expensive?

☐ Yes (go to 12)

☐ No (go to 12)

12a. Has anything in your experience, training or out-of-school activities facilitated your teaching of the course?

☐ Yes (Please explain)

☐ No

12b. Has anything in the school — the general atmosphere, other courses, the school philosophy — facilitated your teaching of the course?

☐ Yes

☐ No

12c. Has "Heartsmart" had any effect on you? (Have your behaviors, teaching style or attitudes to yourself, to students or to other adults changed?)

☐ Yes

☐ No

C. Student Reactions.

13. How do you think your students felt about the program? (Probes: Did they look forward to it? Did they talk about it to you? With one another?) (go to 14)

14. Did the students behave differently as a result of the Heartsmart materials?

☐ Yes (go to 15)

☐ No (go to 15)

15. Are there certain students in your class who seemed to benefit a lot from the program?

☐ Yes Why did the program seem to work so well with these children? (go to 16)

☐ No (go to 16)

16. Were there any children in your class who you feel should not have participated in the program?

☐ Yes (go to 17)

☐ No (go to 17)

17. From your experiences, what were some of the benefits, if any, that accrued from the Heartsmart program? (go to 18)

18. What if any were some of the disadvantages (discomforts) that resulted from the Heartsmart instruction? (go to 18a)

18a. Was there much negative peer reaction between students?

☐ Yes Could you have used more advice? (go to D-19)

☐ No (go to D-19)

D. Use of Heartsmart Concepts

19. Did you have any opportunitites to use Heartsmart-related ideas, vocabulary, or activities with your class during other classroom activities?

☐ Yes Explain/Describe (go to 20)

☐ No (go to 20)

*20. Refer to the teacher's log that lists the optional activities completed. Ask teacher to expand the explanation of any he/she developed.

20a. How helpful and necessary did you find the optional activities? When, in your opinion, are they most helpful (best used)?

21. Did you choose to make any changes in your schedule, in the way you administered the program, or in the amount of time you spent on program materials?

☐ Yes Please describe/explain. (go to 23)

☐ No (go to F-24)

F. Summary

*22. Refer to the teacher's Unit Opinion Surveys and ask him/her to discuss or expand his/her responses. (go to 23)

*23. Invite teacher to ask you any questions, and/or to summarize his/her overall reactions to the program and field test experience.

Code________________

WHAT WOULD YOU DO?

This is not a test. We would like to know what you would do in each of these situations. Think about the situation and then choose the answer that you think tells what you would do. Put a check (✓) next to your choice.

1. Everyone tells Martin how wonderful he was in the school play. He feels embarrassed by what they say. If you were Martin, what would you do?

__ (a) Say you're embarrassed, but thank them for the compliments.

__ (b) Try to change the subject.

__ (c) Say, "I wasn't really so good."

2. Ellen visits her friend Jane, but Jane doesn't want to play. This hurts Ellen's feelings. If you were Ellen, what would you do?

__ (a) Think that Jane is angry with you for something, and then walk away.

__ (b) Tell her that your feelings are hurt, and then ask her to explain why she doesn't want to play.

__ (c) Tell Jane you'll see her some other time, and walk away.

3. Dorothy and Bonnie are playing ball when Dorothy's little sister starts bothering them and getting in the way of their game. If you were Dorothy, what would you do?

__ (a) Tell your parents that your little sister is being a pest and to make her go away.

__ (b) Tell your little sister to go somewhere else to play.

__ (c) Tell your little sister that you feel angry at her, and ask her to find something else to do.

4. Five boys and girls in your class start a secret club. You want to be in the club, but the other kids haven't asked you. What would you do?

__ (a) Tell the kids that you feel left out, and that you would like to be in their club.

__ (b) Think that the other kids don't like you and feel angry at them.

__ (c) Tell your teacher that the other kids are starting a secret club and to make them let you join.

5. You feel very sad because your parakeet died. What would you do?

__ (a) Ask your parents to get a new parakeet.

__ (b) Think that it was only a bird and not very important.

__ (c) Be sad and even cry if you feel like it.

6. You want to watch your favorite show on TV but your older sister wants to watch another show. She pushes you away and puts her show on. What would you do?

__ (a) Get your mother or father to make your sister change the channel.

__ (b) Tell your sister you really want to see your show a lot and ask her to let you watch it.

__ (c) Push your sister back and switch on your show.

7. Your cousin won't let you play in his new treehouse. What would you do?

__ (a) Ask him why he won't let you play in the treehouse, and tell him how you feel about it.

__ (b) Go into the treehouse when he's not there.

__ (c) Ask his mother to let you play in the treehouse.

8. Donald gets mad when he sees his little brother's toys all over his half of the bedroom. If you were Donald, what would you do?

__ (a) Beat up your brother, and make him move his toys.

__ (b) Tell your brother you don't like the toys on your side and ask him to move them.

__ (c) Put your brother's toys, and some of yours, all on his side to teach him a lesson.

9. Last week Amy and Nora had a fight. Nora went home from Amy's crying, even though she thought she was right. Now Amy asks Nora to come over to play. If you were Nora, what would you do?

__ (a) Tell Amy how you felt about the fight, and why you felt that way.

__ (b) Say, "I'm sorry, but I can't play with you today."

__ (c) Go over to Amy's and pretend there was no fight.

10. It was Valentines Day. Sarah sent Judy a valentine but Judy didn't send one to Sarah. Sarah's feelings are hurt. If you were Sarah, what would you do?

__ (a) Ignore Judy for awhile, even though you still want to be her friend.

__ (b) Ask Judy why she didn't send you a valentine, and explain that your feelings were hurt.

__ (c) Think that Judy doesn't like you any more.

11. Takeo doesn't feel like going to Cub Scouts because he wants to be alone. His mother asked him why he isn't going. If you were Takeo what would you do?

__ (a) Tell her you think you're getting sick and want to stay home.

__ (b) Tell her you feel like being alone today.

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12. John and Tim are picking on Bob every day at school and teasing him a lot. If you were Bob what would you do?

__ (a) Tell them that their teasing upsets you.

__ (b) Ignore them and walk away.

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13. Matthew is sick and his father is taking him to the doctor. Matthew is scared that he's going to have a shot. If you were Matthew, what would you do?

__ (a) Act brave and not let anyone know you're afraid.

__ (b) Tell your father you don't need a shot.

__ (c) Tell your father and the doctor that you're scared of having a shot.

14. At her birthday party Humiko doesn't like it because everyone is playing with the new toys and not paying attention to her. If you were Humiko, what would you do?

__ (a) Tell them you want them to play more with you.

__ (b) Start acting mean to the kids.

__ (c) Ask her mother to put the toys in another room.

15. Fred did very well when he was reading out loud in his group. Everyone enjoyed his reading and he felt glad. If you were Fred, what would you do?

__ (a) Feel glad inside, and keep your feelings to yourself.

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16. All of Billy's friends were going to the movies on Saturday, but they didn't invite him to come along. Billy's feelings are hurt. If you were Billy, what would you do?

__ (a) Stay home and do something else, and try to forget about it.

__ (b) Tell them how you feel, and ask them if you can go, too.

__ (c) Show up at the movies at the same time they do.

17. Jane has been waiting her turn to get a drink of water and a boy in her class cuts in line in front of her. If you were Jane, what would you do?

__ (a) Push him out of the way.

__ (b) Tell him you don't like what he's doing, and ask him to wait his turn.

__ (c) Ignore him, because your turn will come pretty quickly anyway.

18. Richard, who is new in the school, doesn't have any friends. Everyone ignores him. If you were Richard what would you do?

__ (a) Ask someone you like to play with you.

__ (b) Play by yourself.

__ (c) Try to take charge.

C7a

Code ________________

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"What Would You Do?" Scoring Key

1. A1*
   B4
   C4

2. A5
   B2*
   C4

3. A6
   B7
   C3*

4. A3*
   B5
   C6

5. A6
   B4
   C1*

6. A6
   B3*
   C7

7. A2*
   B7
   C6

8. A7
   B3*
   C7

9. A1*
   B4
   C4

10. A4
    B2*
    C5

11. A4
    B1*
    C4

12. A1*
    B4
    C6

13. A4
    B8
    C1*

14. A3*
    B7
    C6

15. A4
    B8
    C1*

16. A4
    B3*
    C8

17. A7
    B3*
    C4

18. A3*
    B4
    C8

KEY

I. Desired Program-Related Responses

1. Expression of feelings
2. Asking others to express feelings, and stating own feelings
3. Expressing feelings/desires and requesting action of another to facilitate desire.

II. Unacceptable Program-Related Responses

4. Hiding feelings
5. Guessing other's feelings
6. Depending on authority/others
7. Taking physical action against another person or taking action which negatively affects another person

III. Unrelated Program Responses

8. Other (catch-all category)

* indicates "correct" response

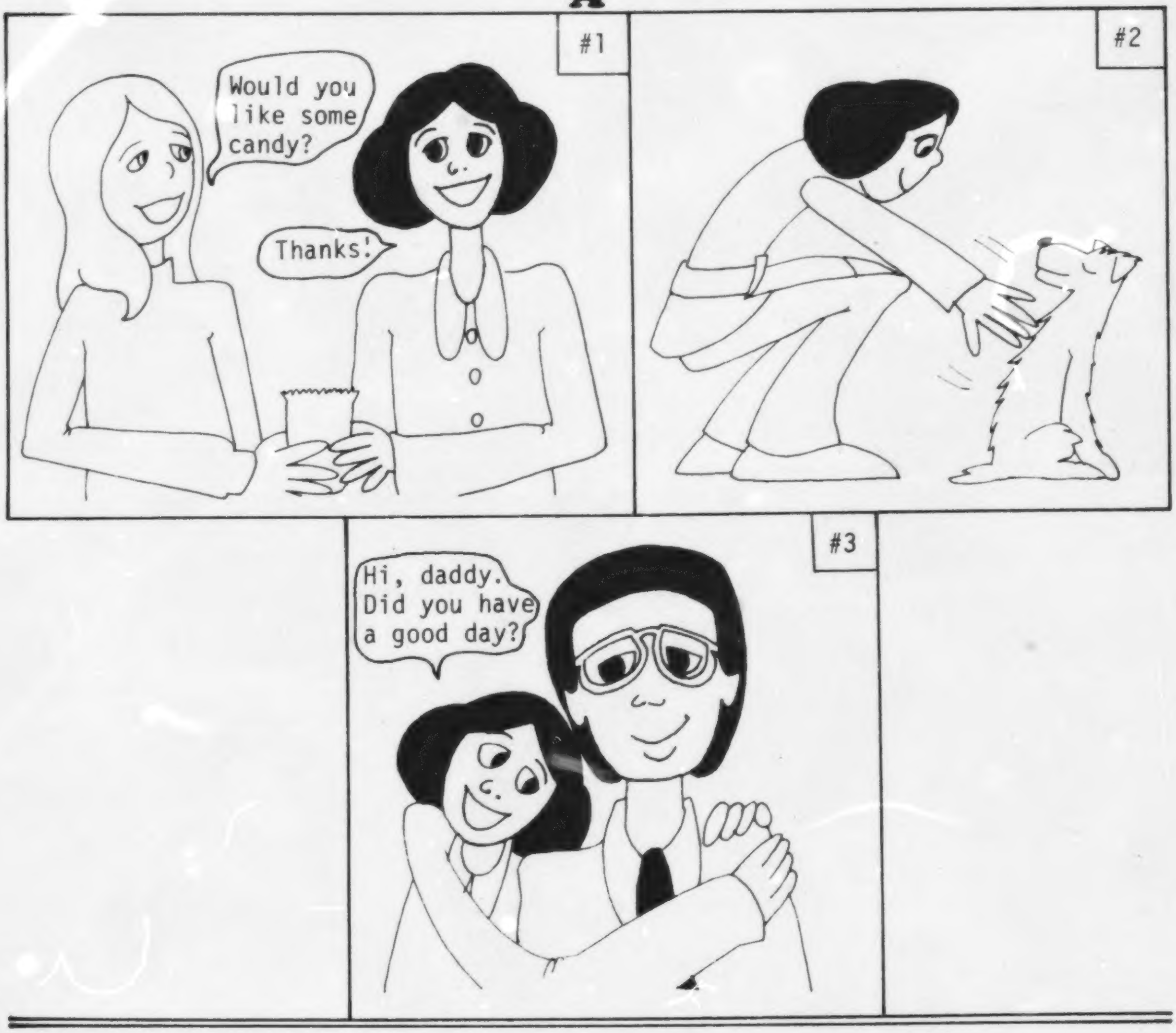
C7c

Code________________

WHAT'S HAPPENING?

This is not a test. There are eight (8) sets of cartoons. There are questions about each set of cartoons. Try to answer the questions as well as you can. Don't worry about spelling. You may write one word answers if you like. Turn the page only when you are told that you may do so.

A


#1
Would you like some candy?
Thanks!
#2
#3
Hi, daddy. Did you have a good day?

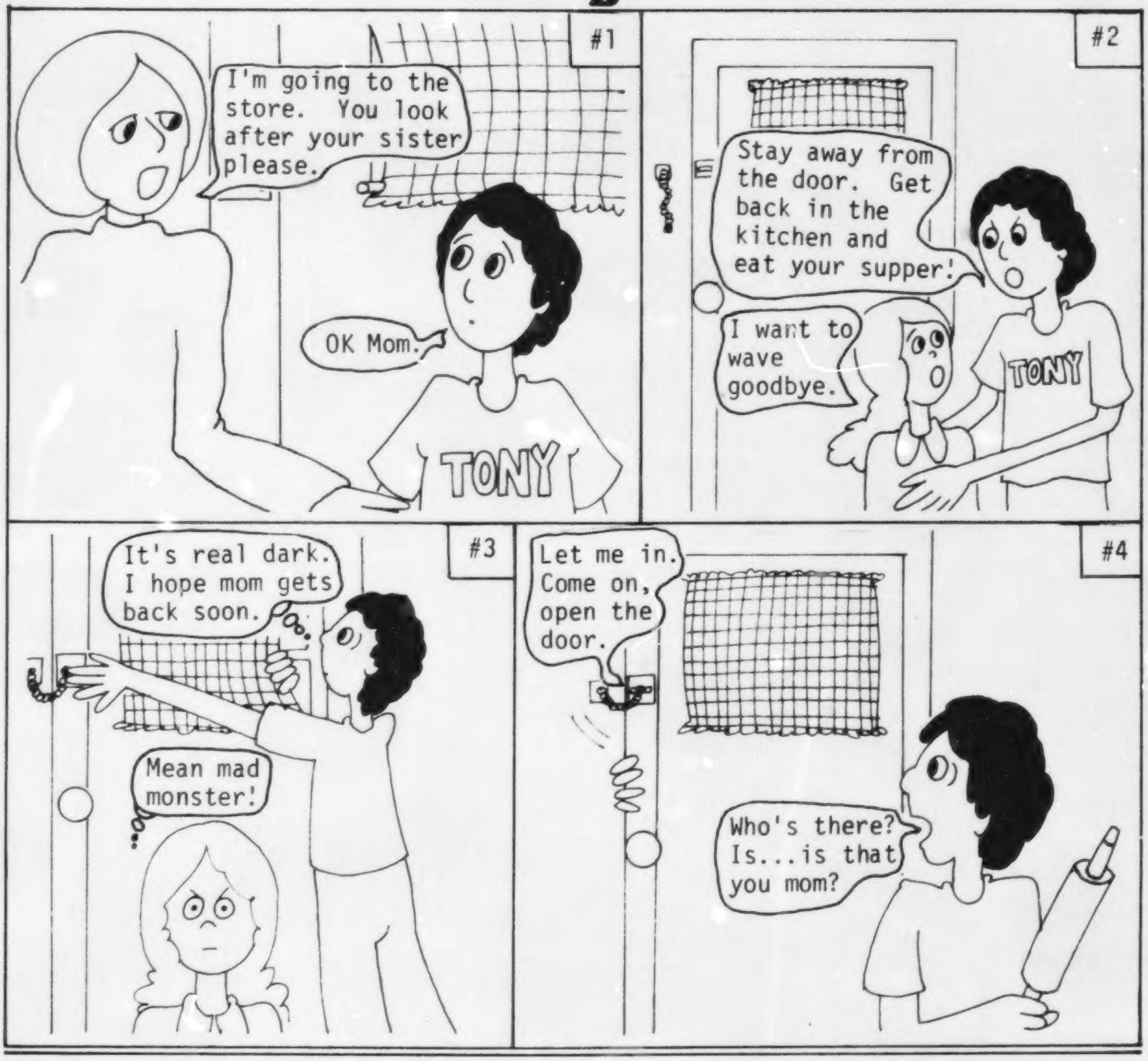
1. What feeling did the girl show in the three pictures?

____

2. Why did she do the things she did in the three pictures?

____

B


#1
I'm going to the store. You look after your sister please.
OK Mom.
TONY
#2
Stay away from the door. Get back in the kitchen and eat your supper!
I want to wave goodbye.
TONY
#3
It's real dark. I hope mom gets back soon.
Mean mad monster!
#4
Let me in. Come on, open the door.
Who's there? Is...is that you mom?

1. In picture #2, Tony is showing a feeling. What feeling is he showing?

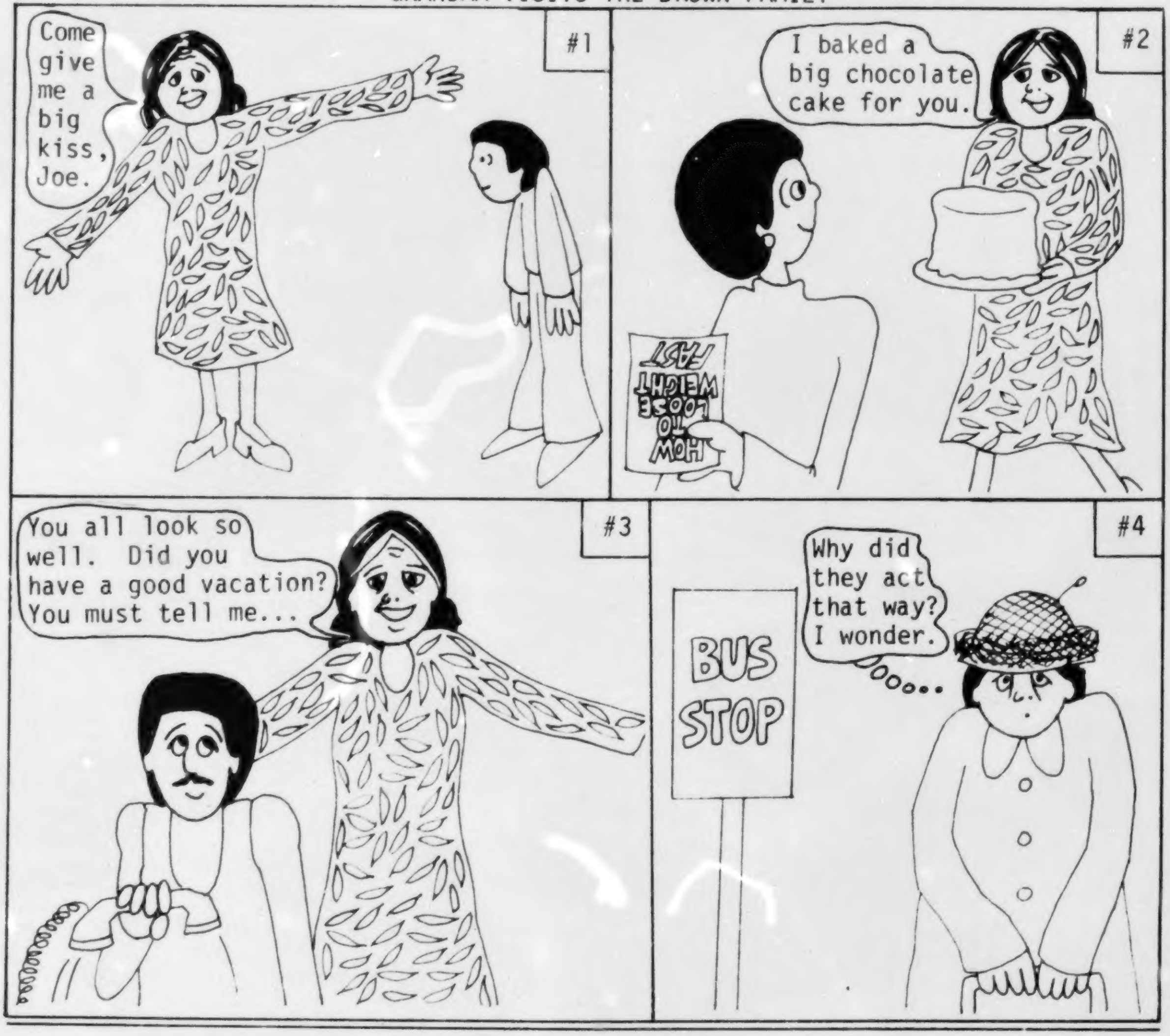
2. Tony's sister thinks he is angry. What should she do to find out if she is right?

3. Why do you think Tony is acting the way he is in picture #4?

4. How do you think Tony really feels about being in charge when his mother's not in the house?

C

GRANDMA VISITS THE BROWN FAMILY


#1
Come give me a big kiss, Joe.
#2
I baked a big chocolate cake for you.
HOW TO LOOSE WEIGHT FAST
#3
You all look so well. Did you have a good vacation? You must tell me...
#4
BUS STOP
Why did they act that way? I wonder.

1. How to you think grandma feels about the Brown family in the first three pictures? ______________________________

2. Tell one thing grandma did to show her feelings.

____

3. a Do you think that Joe wanted to kiss grandma?

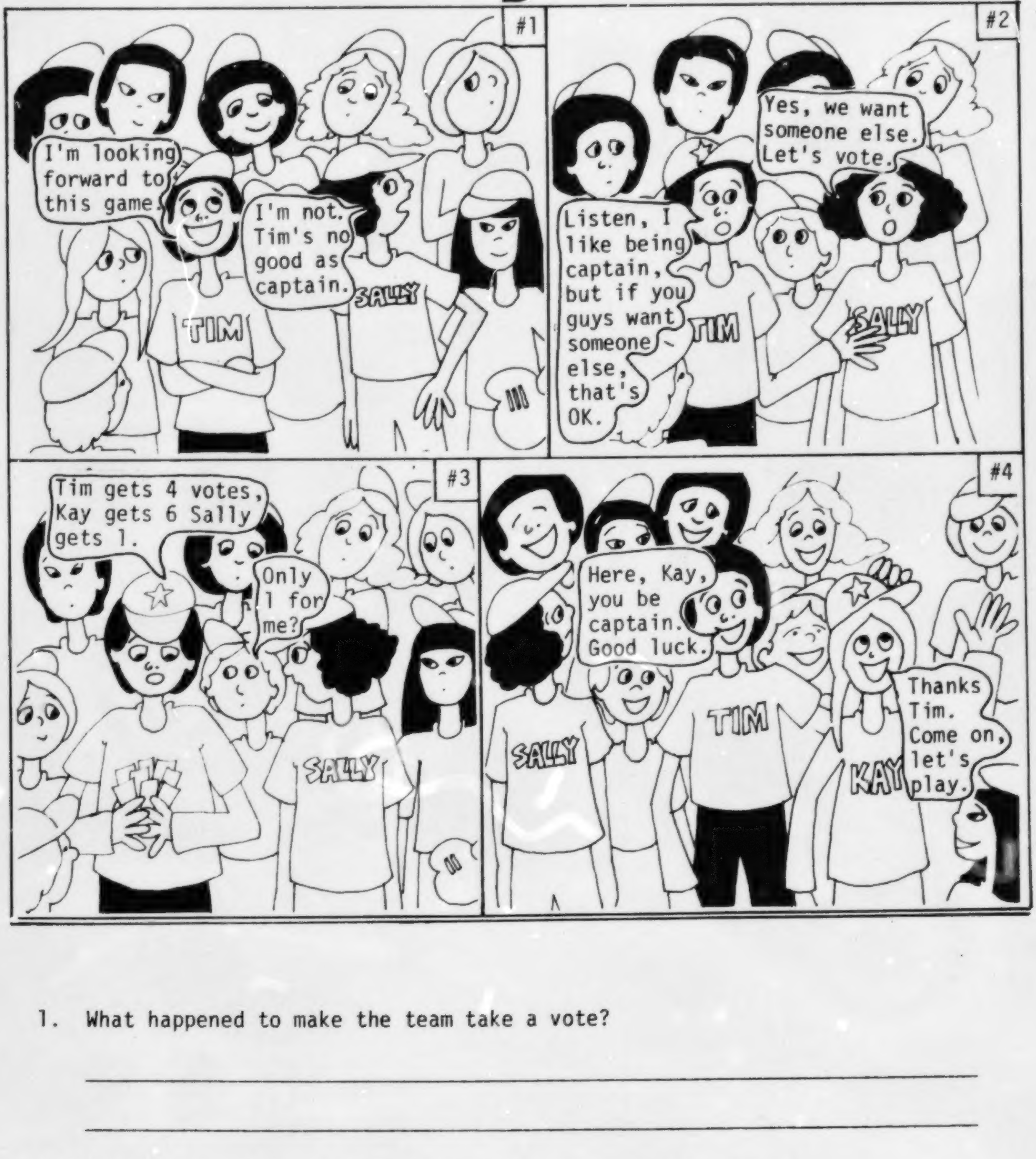
CIRCLE ONE: YES NO I DON'T KNOW

b Why or why not? ______________________________

4. If grandma wants an answer to the question she's thinking in picture #4, what should she do?

____

D

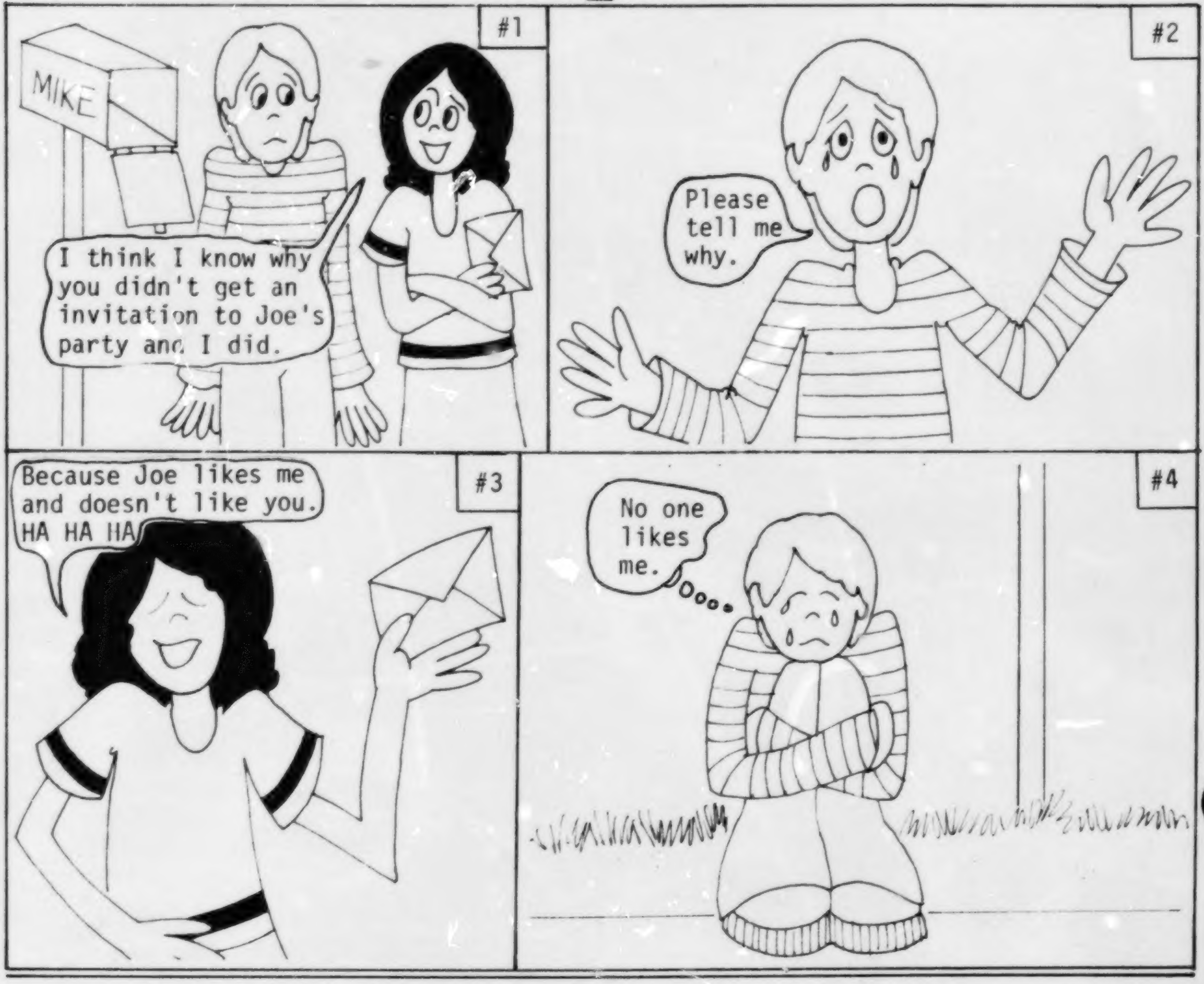

#1
I'm looking forward to this game.
I'm not. Tim's no good as captain.
TIM
SALLY
#2
Yes, we want someone else. Let's vote.
Listen, I like being captain, but if you guys want someone else, that's OK.
TIM
SALLY
#3
Tim gets 4 votes, Kay gets 6 Sally gets 1.
Only 1 for me?
SALLY
#4
Here, Kay, you be captain. Good luck.
Thanks Tim. Come on, let's play.
SALLY
TIM
KAY

1. What happened to make the team take a vote?

2. What was Sally feeling when she said "Only one for me?"

3. Draw a circle around the words Tim said that tell how he felt about being captain of the team.

E


#1
MIKE
I think I know why you didn't get an invitation to Joe's party and I did.
#2
Please tell me why.
#3
Because Joe likes me and doesn't like you. HA HA HA
#4
No one likes me.
Ooo

1. a. Just from looking at the story pictures, is it possible to know if Ann is telling the truth?

   CIRCLE ONE: YES NO

   b. If you circled YES, explain how you could tell.

   ____

   ____

   c. If you circled NO, explain how you could find out the truth.

   ____

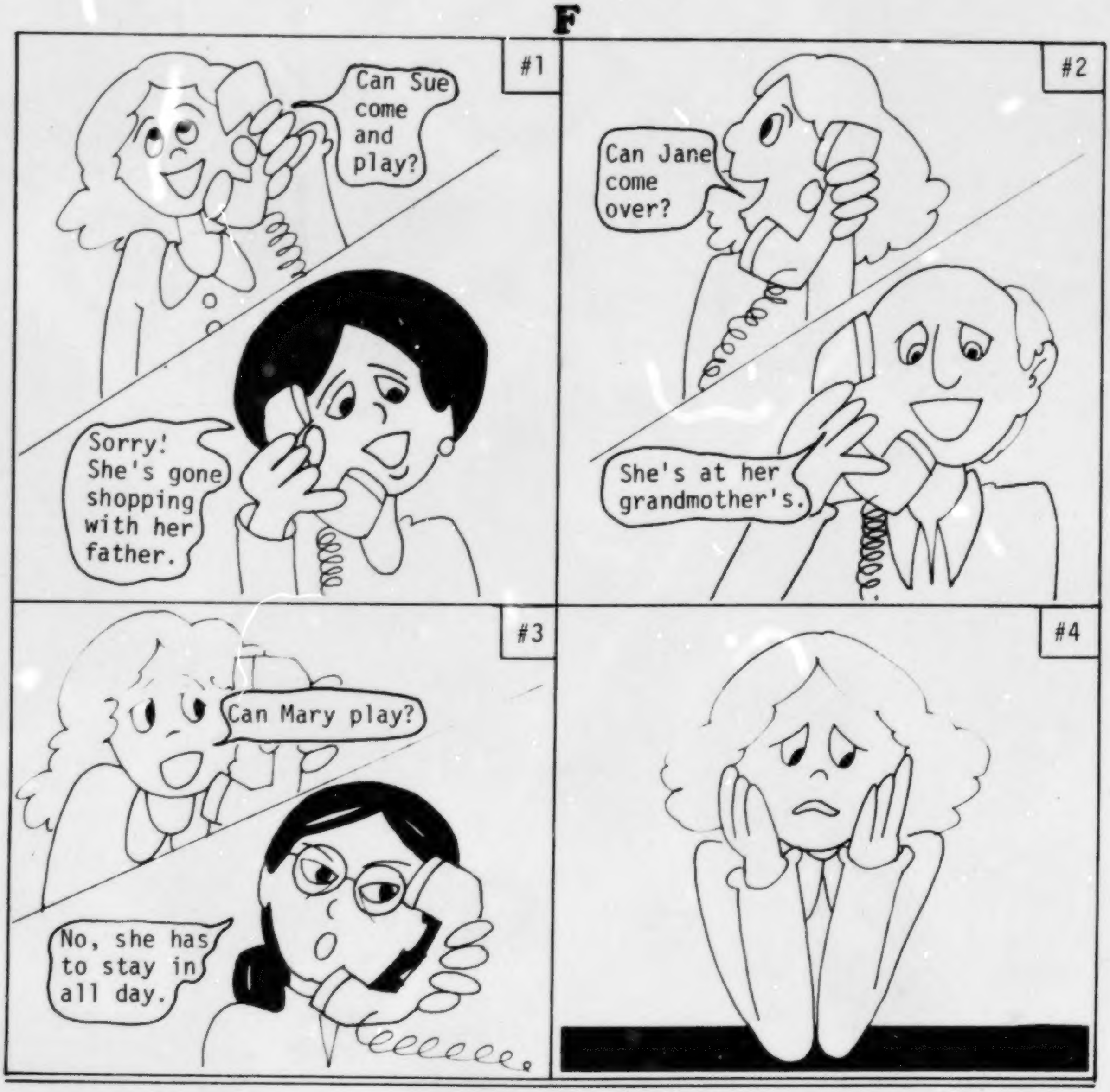
   ____

2. How can you tell how Mike feels in picture #4? Write as many answers as you know.

____

____

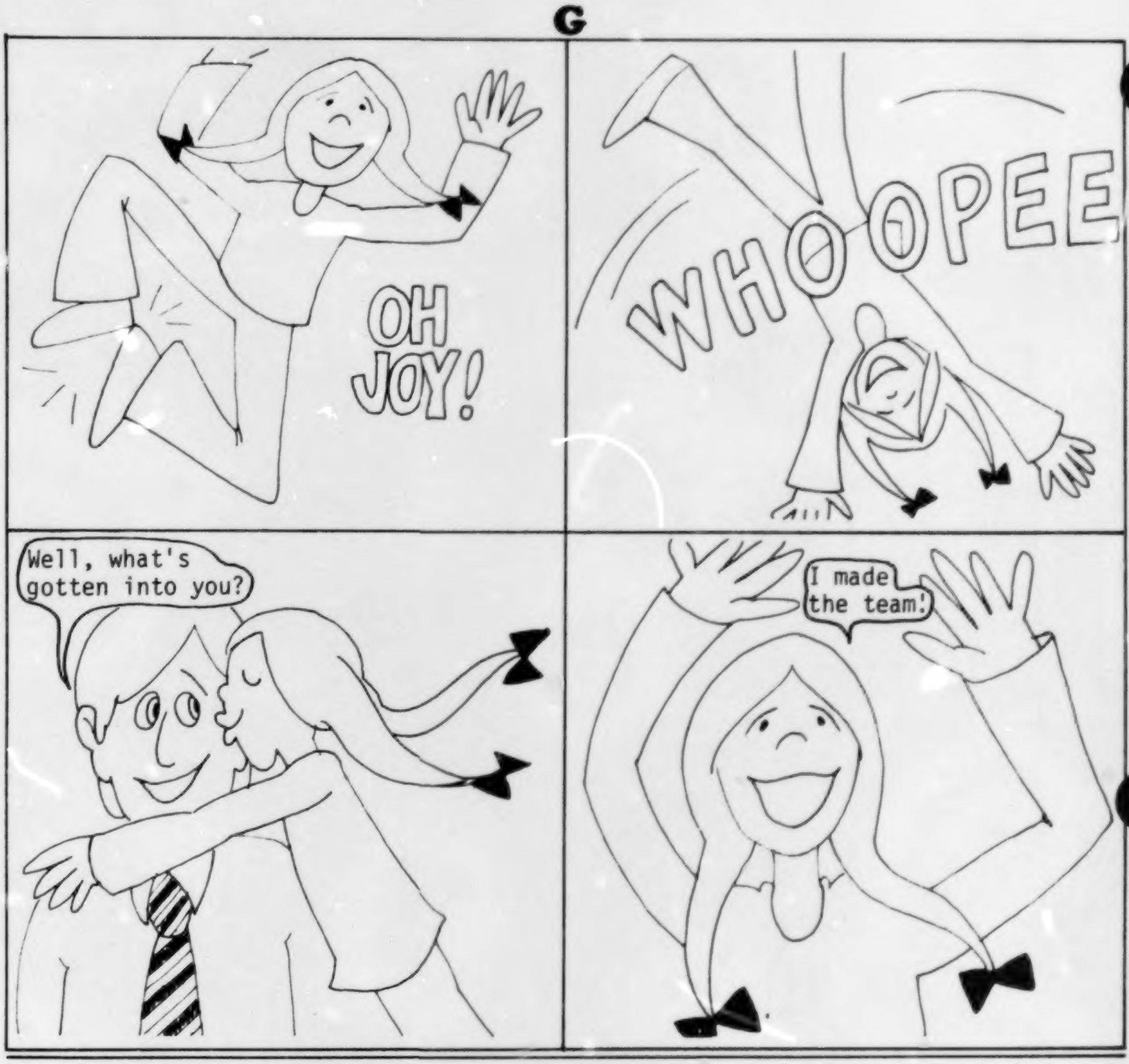
F


#1
Can Sue come and play?
Sorry! She's gone shopping with her father.
#2
Can Jane come over?
She's at her grandmother's.
#3
Can Mary play?
No, she has to stay in all day.
#4

1. Why did Cindy act the way she did in the first three pictures?

2. Why do you think Cindy is acting the way she is in picture #4?

G


OH JOY!
WHOOPEE
Well, what's gotten into you?
I made the team!

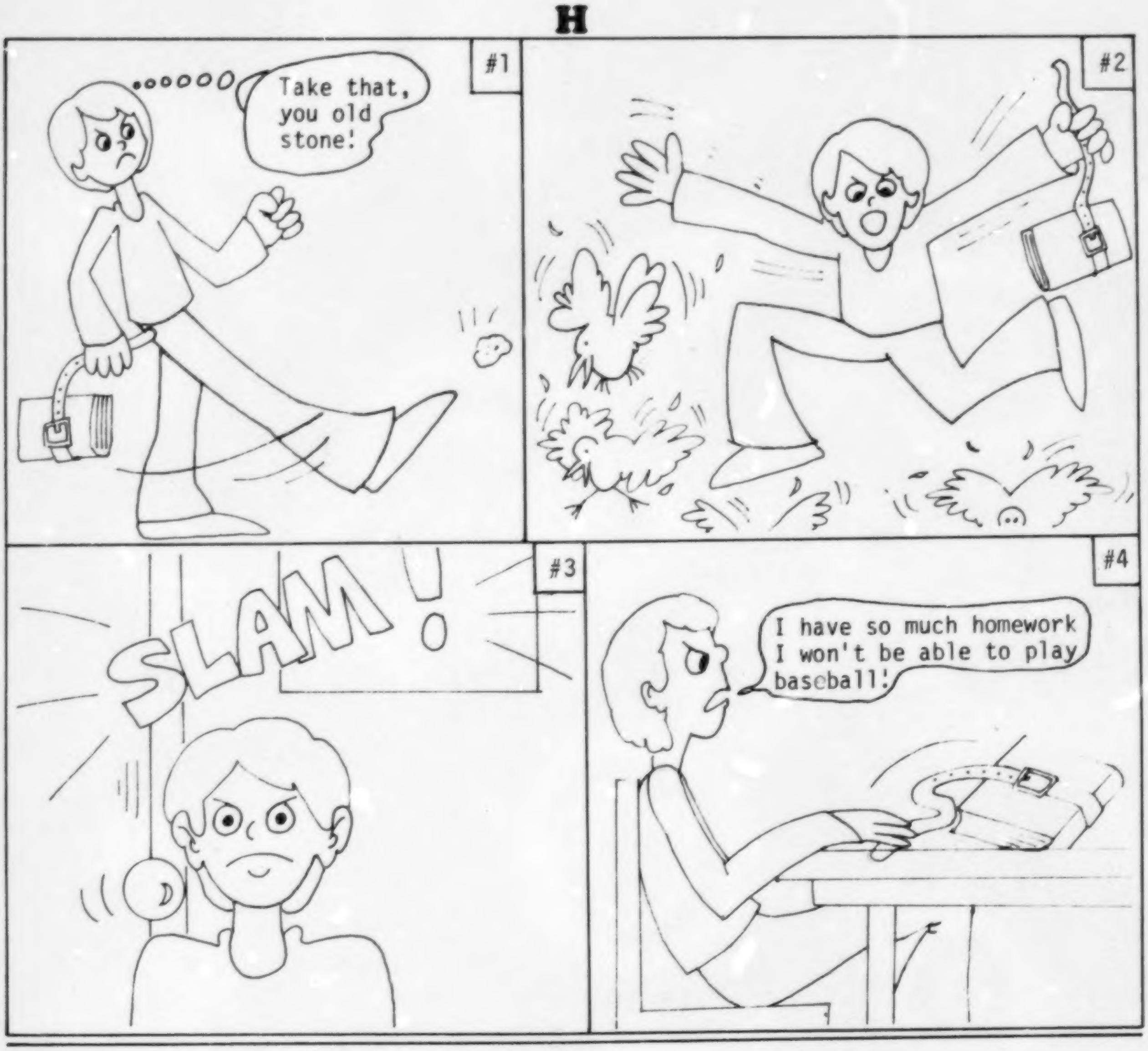
1. Write down all the ways you can see that Pat showed her feeling.

____

____

____

H


#1
Take that, you old stone!
#2
#3
SLAM!
#4
I have so much homework I won't be able to play baseball!

1. What was the boy feeling in the story?

____

2. What happened to make the boy feel that way?

____

3. Why did the boy act the way he did in picture #2?

____

"What's Happening?" Scoring Key

A 1. Happiness/affection/friendliness

A 2. She was happy./She was feeling friendly.

B 1. Anger

B 2. She should ask Tony what he is feeling.

B 3. Tony is scared/worried.

B 4. He doesn't like being in charge./He is scared about being in charge.

C 1. She likes them/feels affectionate (and wants them to like her).

C 2. *Any one of the following:*

- She wanted to kiss Joe.
- She said they looked well.
- She smiled at them.
- She made a cake for them.
- She asked about their vacation.

C 3. *a. and b. are related.*
If student circles NO, he or she should explain that Joe doesn't feel like kissing just now.
If student circles YES, he or she should explain that Joe doesn't want to hurt grandma's feelings.

C 4. She should go back and ask them.

D 1. Sally said Tim was no good
Sally said they should vote.

D 2. Sad/angry/disappointed

D 3. Student should circle Tim's words in picture #2.

E 1. *a., b. and c. are related.*
a. No.
b. *Student should not respond.*
c. Ask Joe why Mike was not invited.

E 2. *Student may be scored on the number of valid responses made. Any or all of the following are appropriate:*

- He says, "No one likes me."
- He is alone.
- His body looks sad.
- He is crying.
- His face is sad.

F 1. She wanted someone to play with.

F 2. She is lonely/has no one to play with.

G 1. *Students may be scored on the number of valid responses made. Any or all of the following are appropriate:*

- She said, "Oh Joy'." "Whoopee!" and "I made the team."
- She is smiling (shows feelings with her face).
- She dances.
- She does a cartwheel. (shows feelings with her body)
- She waves her hands,
- She kisses her father (shares feelings).

H 1. Angry.

H 2. He had too much homework/couldn't play baseball.

H 3. He was angry/feeling mad/in a bad mood.

Program Objectives	Related Items
• Identify (infer) feelings and behaviors and infer feelings from behavior in others.	A1, B1, B4, C1, D2, H1.
• Identify ways in which people may behave when they have certain feelings.	C2, D3, E2, G1.
• Identify cause and effect relationships between feelings and behavior.	A2, B3, C3, D1, F1, F2, H2, H3.
• Determine feelings in others by asking (not guessing).	B2, C4, E1a, E1c.

C8a

CODE______

		Circle Your Answer	
1.	The children in this class enjoy their schoolwork.	Yes	No
2.	Children are often fighting with each other.	Yes	No
3.	My best friends are in my class.	Yes	No
4.	Some of the children in our class are mean.	Yes	No
5.	Most children are pleased with the class.	Yes	No
6.	Many children in the class play together after school.	Yes	No
7.	Some children don't like the class.	Yes	No
8.	Many children in our class like to fight.	Yes	No
9.	In my class everybody is my friend.	Yes	No
10.	Most of the children in my class enjoy school.	Yes	No
11.	Some children don't like other children.	Yes	No
12.	In my class I like to work with others.	Yes	No
13.	Most children say the class is fun.	Yes	No
14.	Some children in my class are not my friends.	Yes	No
15.	Children have secrets with other children in the class.	Yes	No
16.	Some children don't like other children.	Yes	No
17.	Some children are not happy in class.	Yes	No
18.	All of the children know each other well.	Yes	No
19.	Children seem to like the class.	Yes	No
20.	Certain children always want to have their own way.	Yes	No
21.	All children in my class are close friends.	Yes	No
22.	Some of the children don't like the class.	Yes	No

		Circle Your Answer	
23.	Children in our class fight a lot.	Yes	No
24.	All of the children in my class like one another.	Yes	No
25.	Certain children don't like what other children do.	Yes	No
26.	The class is fun.	Yes	No
27.	Children in our class like each other as friends.	Yes	No

C8b

CODE ____

Please tell how you really feel or act.
There are no right or wrong answers.
Take as much time as you need to finish

Part I -- What to do:

Each time read the sentence. Read the groups of words under the sentence. Choose the ONE word or group of words you want to put in the gap. Draw a line under the answer you choose.
ONLY DRAW A LINE UNDER ONE WORD OR GROUP OF WORDS FOR EACH SENTENCE.

1. I try to make _______ children do what I want them to do.

most many some a few one or two no (none)

2. I try to be very friendly and to tell my secrets to _______ children.

most many some a few one or two no (none)

3. I like _______ children to invite me to take part in what they're doing.

most many some a few one or two no (none)

4. What I do depends a lot on what _______ children tell me.

most many some a few one or two no (none)

5. I like _______ children to act as if they don't know me very well.

most many some a few one or two no (none)

6. I try to take charge of things when I am with _______ children.

most many some a few one or two no (none)

7. I act unfriendly with _______ children.

most many some a few one or two no (none)

8. I like _______ children to ask me to take part when they're talking about something.

most many some a few one or two no (none)

9. I let _______ children take charge of things.

most many some a few one or two no (none)

10. I like _______ children to act friendly to me.

most many some a few one or two no (none)

11. I try to have _______ children do things the way I want them done.

most many some a few one or two no (none)

12. I don't get very friendly with _______ children.

most many some a few one or two no (none)

13. I like _______ children to choose me for a friend.

most many some a few one or two no (none)

14. I take orders from _______ children.

most many some a few one or two no (none)

15. I like _______ children to act very friendly to me.

most many some a few one or two no (none)

16. I try to be friendly to _______ children.

most many some a few one or two no (none)

17. I like _______ children to ask me to join in what they're doing.

most many some a few one or two no (none)

18. I follow what _______ children are doing.

most many some a few one or two no (none)

19. I like _______ children to get to know me very well.

most many some a few one or two no (none)

20. I try to have close, warm friendships with _______ children.

most many some a few one or two no (none)

21. I let _______ children tell me what to do.

most many some a few one or two no (none

22. I like _______ children to act very friendly and tell me their secrets.

most
many
some
a few
one or two
no (none)

Part II -- What to do:

Each time, read the sentence. Read the groups of words under the sentence. Choose the ONE word or group of words you want to add to the sentence. Draw a line under the answer you choose.
ONLY DRAW A LINE UNDER ONE WORD OR GROUP OF WORDS FOR EACH SENTENCE.

23. When other children are playing games, I like to join them _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

24. I try to take charge of things when I'm with children _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

25. I try to have close, warm friendships with children _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

26. I like other children to invite me to their houses when they are having friends over _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

27. What I depends a lot on what other children tell me _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

28. I like children to act as if they don't know me very well _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

29. When a group of children gets together to do something, I like to join in with them _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

30. I try to make other children do what I want them to do _______.

almost all the time
a lot of the time
sometimes
once in a while
almost never
never

31. I try to have close friendships with children _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

32. I like to be invited to parties _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

33. I take orders from other children _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

34. I like children to act very friendly to me _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

35. I try to take part in clubs and school-groups _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

36. I like to tell other children what to do _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

37. I try to have friends that I can be very friendly with and tell my secrets to _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

38. I like children to ask me to join in what they're doing _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

39. I let other children tell me what to do _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

40. I like children to act not too friendly to me _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

41. I try to include other children in my plans _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

42. I try to be the boss when I am with other children _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

43. I try to get very friendly with other children and to tell them my secrets _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

44. I like children to invite me to things _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

45. I follow what other children are doing _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

46. I like other children to get to know me very well _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

47. When children are doing things together, I like to join them _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

48. I try to have other children do things I want done _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

49. When I'm going to do something I try to ask other children to do it with me _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

50. I like other children to choose me for a friend _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

51. I like to go to parties _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

52. I try to have other children do things the way I want them done _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

53. I try to have other children around me _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

54. I join clubs _______.

almost all the time	a lot of the time	sometimes	once in a while	almost never	never

APPENDIX D

EVALUATION DATA

1. Correlation between total scores on What's Happening? and What Would You Do? tests.
2. Intercorrelations among selected My Class Inventory Scales.
3. Intercorrelations among FIRO-BC Scales.

Correlation Between Total Scores on What's Happening? And What Would You Do? Tests

	What Would You Do?
What's Happening?	.34*

* $p < .01$

D2

Intercorrelations Among Selected My Class Inventory Scales[1]

SCALE	Satisfaction	Friction	Cohesion
Satisfaction		-.48*	.37*
Friction	-.45*		-.32*
Cohesion	.38*	-.45*	

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[1] Pre-Test correlations are below diagonal;
Post-Test correlations above diagonal.
Sample N=359

* P < .001

Intercorrelations Among FIRO-BC Scales[1]

SCALE	Expressed Inclusion	Wanted Inclusion	Expressed Control	Wanted Control	Expressed Affection	Wanted Affection
Expressed Inclusion		.65*	.02	.27*	.45*	.42*
Wanted Inclusion	.58*		.09	.27*	.45*	.54*
Expressed Control	.06	.08		.32*	-.25*	-.11
Wanted Control	.34*	.31*	.34*		.16	.12
Expressed Affection	.40*	.39*	-.28*	.07		.54*
Wanted Affection	.26*	.40*	-.29*	-.06	.57*	

---

[1] Pre-Test correlations are below diagonal; Post-Test correlations above diagonal
Sample N=359

* $P < .001$